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FAMILY FOOD PRODUCTION IN AFRICA: SUSTAINABLE AGRICULTURE THROUGH EXTENSION AND APPROPRIATE TECHNOLOGY

COMMITTED 127 of 190

ORIGINAL

HEARING

BEFORE THE

SELECT COMMITTEE ON HUNGER
HOUSE OF REPRESENTATIVES

NINETY-NINTH CONGRESS

SECOND SESSION

HEARING HELD IN WASHINGTON, DC, APRIL 17, 1986

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FAMILY FOOD PRODUCTION IN AFRICA: SUSTAINABLE AGRICULTURE THROUGH EXTENSION AND APPROPRIATE TECHNOLOGY

THURSDAY, APRIL 17, 1986

HOUSE OF REPRESENTATIVES,
SELECT COMMITTEE ON HUNGER,
Washington, DC.

The committee met, pursuant to call, at 9:35 a.m., in room 2212, Rayburn House Office Building, Hon. Mickey Leland (chairman of the committee) presiding.

Members present: Representatives Panetta, Daschle, Fazio, Gilman, and Smith.

OPENING STATEMENT OF HON. MICKEY LELAND, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

Chairman LELAND. We are going to begin the hearing now.

As chairman of the House Select Committee on Hunger, I would like to welcome the witnesses before us today on the subject of family food production in Africa. This hearing will be video taped by the U.S. Information Agency. The video taped hearing will be shown to African specialists in Kenya and Nigeria. On June 26, after the African specialists have had some time to view the hearing we will hook up with them via satellite for a two-way teleconference. Using the two-way teleconference, we will be able to discuss directly with these experts the types of bilateral assistance Africans need to increase local food production and achieve food self-sufficiency.

In 1984, 140 million of Africa's 531 million people were fed entirely with grain from abroad. In 1985, the numbers of those fed with imported grain may have reached 170 million. In February 1985, the United Nations reported that some 10 million people had left their villages in search of food.

Since 1967, per capita grain production has been declining with very few countries in Africa escaping this downward trend. The current food production/population growth ratio in sub-Saharan Africa is dramatically unbalanced. Present and projected trends in both sectors show virtually no prospect for closing the gap between population and food production growth, and in fact, there is every reason to believe that per capita food production will continue its decline at current or even accelerated levels.

In addition to population pressures, Africa's agricultural resource base is deteriorating. Land productivity in Africa has declined. It is estimated that more than 40 percent of Africans live in

countries where the grain yields per hectare are lower today than a generation ago. Soils in Africa suffer from wind and water erosion, nutrient depletion as firewood shortages lead to the burning of crop residues, and overgrazing of livestock.

Agriculture in Africa is more complex than in any other continent. In addition to environmental degradation, infrastructure impediments and food pricing policies which favor urban consumers contribute to Africa's overall agricultural decline. Social and cultural biases have also contributed to declining per capita food production. African women engage in 80 to 90 percent of the agricultural work and receive less than 15 percent of the agricultural training available in Africa.

Because of Africa's unique agricultural constraints, the Green Revolution we witnessed in Asia can not be easily applicable to Africa. Lasting solutions to Africa's food production decline must involve Africa's farmers and pastorlists in their planning.

Today, we will hear from distinguished witnesses on effective mechanisms for assisting Africans to achieve lasting solutions to Africa's food production decline. I want to welcome each of you here today and I look forward to your testimonies.

The Chair would now like to yield to his colleague from New York, the Honorable Ben Gilman.

OPENING STATEMENT OF HON. BENJAMIN A. GILMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. GILMAN. Thank you, Mr. Chairman.

Mr. Chairman, I want to commend you as our chairman of the Select Committee on Hunger for arranging this hearing. It is an issue that is of great importance not only to the future of the African Continent but to the sustainability of our own productive potentials. Man's struggle for food is destroying the very land on which food is grown. The United Nations' Environment Program, the UNEP, estimates that in the next 15 years the world will lose some 10 percent of its croplands and will lose twice that amount in rangeland and forestlands. Much of the remaining land will lose a significant share of its productive potential through soil erosion and degradation. Yet, food production is going to have to be expanded by about 50 percent before the end of the century in order to feed the world's rapidly expanding population.

In the developing nations where 90 percent of the world's humanity live, demand for food and agricultural products will double by the year 2000. Meanwhile, the natural resources that are needed to increase food production, soil, fresh water, and forest cover, are being exhausted at record rates. There is much less cultivable land per person and it is rapidly diminishing.

In 1974, the world population was almost 4 billion, with an average of 0.355 hectares of cropland per person. Now, there is less than 0.3 hectares per person. By the end of this century, there will be over 6.2 billion people in only 0.24 hectares of cropland per person.

In sub-Saharan Africa, overgrazing, firewood gathering, overharvesting of trees, overcropping on fragile soils, all of that is crippling permanently the local resource base. And due to these deadly

combinations, large chunks of the Sahel are rapidly turning into desert. Desertification now threatens about 2.7 million square miles south of the Sahara. Ethiopia alone loses about 1 billion tons of top soil annually. The United States, with six times that land area, loses a comparable amount each year.

One hundred square miles of land a day in Africa turns into desert; 100 square miles of land each day—permanently. It is without a doubt the 11th hour for the African environment.

Along with subsistence farmers, nomadic herdsmen have been forced into their traditional ranges, and in some cases they are having to graze their herds on ever-shrinking parcels of land. They are on land that does not have the necessary forage to support livestock for any appreciable length of time.

In other instances, at the behest of national governments and the support of multilateral development banks, cattle not native to the region have been introduced for the sole purpose of producing exports. But there is a problem. These cattle require much more forage than do native livestock. As a result, they denude the land of vegetation. And in addition, because they are not used to the severe climatic conditions, they are incapable of surviving any prolonged drought without drawing heavily on already limited water supplies.

There is also a growing consensus that the most effective and least costly way to begin reversing these disastrous trends is by sponsoring small-scale, self-help projects which utilize appropriate technology and agricultural methods best suited to the local environment. These technologies should be low risk, resource conserving, small scale, and locally produced and repaired. In many instances, projects of this sort have been designed and supported by private voluntary and nongovernmental organizations such as Oxfam and UNEP, which work closely with the local governments.

H.R. 2782, which is legislation that I introduced along with a number of my colleagues, provides precisely this approach, by authorizing direct assistance for small-scale, resource-conserving, local projects that offer promise of quick and effective implementation. Special emphasis is placed on grants to international, African and United States nongovernmental, and private voluntary organizations, and on appropriate activities that have proved successful in the past, such as reforestation, erosion control projects, and small-scale farming, and energy production.

Our bill also stresses strengthening the agricultural extension services of the African nations so that they can deal with these issues over the long term.

I look forward to hearing from our distinguished expert witnesses today so that we can become the beneficiary of your insights and your suggestions to help the Congress better understand the options available to dealing with this crucial problem.

Thank you, Mr. Chairman.

Chairman LELAND. Thank you.

I would like to now introduce our first witness, Prof. John Kenneth Galbraith. I am most delighted that he would come and share with us his wisdom.

Professor Galbraith, currently at Harvard University, is a world renown economist and author, as well as the former U.S. Ambassa-

dor to India during the Kennedy administration. Professor Galbraith will provide the committee with a historical overview of food production trends in developing countries and will focus his remarks on the particular needs in sub-Sahara with respect to increasing family food production.

Professor Galbraith.

Thank you so much for participating with this committee.

STATEMENT OF JOHN KENNETH GALBRAITH, ECONOMIST, AND FORMER AMBASSADOR TO INDIA

Mr. GALBRAITH. Mr. Chairman and Mr. Gilman.

I must tell you that I am very pleased to be here this morning in these somewhat martial surroundings. Over the years, I have been the subject of a fair number of congressional hearings, most of them I am happy to say, friendly. I don't think I have ever participated in one with greater importance than the one today, one which involves issues of the greatest human concern.

I have given to the committee an extended statement and I will spare you reading it through. But I will attempt to summarize perhaps, half a dozen central points.

Chairman LELAND. Without objection, your full statement will be included in the record.

Mr. GALBRAITH. I come to this hearing from a lifelong concern with the problems of agriculture. I have said in past times that I think I am the only senior member of the Harvard faculty, present or past, with an advanced degree in animal husbandry, and a further degree in agricultural economics.

I come here out of an intense concern with these matters, I must say more in Asia than in Africa, but out of a good deal of reading that it has been my good fortune to do over the years.

My first point, Mr. Chairman, would be to emphasize that on this problem, as, indeed, on other problems it is extraordinarily important that we see economic development and food production in the context of economic development as a process; and that the policy that is appropriate to an early stage in that process, as in Asia and Africa, may not be appropriate in the later stages, and vice versa. This relates in turn to an error that has characterized very much of our attention and concern for economic development and for agricultural development over the years. We have tended too often to take our own advanced experience, or that of Western Europe, or that of the Socialist Communist world, and transplanted it to an earlier stage of development to which it is not relevant or applicable.

The most prominent example, I should say, of that has been the emphasis, in Asian and African countries, on industrial investment—we take industrial investment as the mark of economic development and economic achievement.

When we look back at our own experience, in the last century we find that when we talked about economic progress 100 years ago, we talked in terms of agriculture as a matter of course. We thought of improved agricultural methods; we thought of the early development of the land-grant colleges and of industrial invest-

ment, particularly in canals and then later in railways, as it was related to the agricultural context.

We must now recognize that in the stage of economic development that one encounters in Africa and Asia, and in lesser measure, perhaps, in Latin America, that early emphasis on agriculture is still of extraordinary importance. We must not think because we have the elaborate industrial structure of a post-agricultural period that that is something which must be transferred as a mark of economic development to the younger countries.

Second, and this refers, Mr. Chairman, to something that was in your excellent earlier statement, we should recognize—must recognize—that there is one system of agriculture which on the whole gives satisfaction to its participants, which no one seeks much to change; and which is, over the long run, the most effective. That is the owner-cultivated farm plot.

This is a matter of extraordinary importance because it means that if one is to have an effective agricultural system, there must be pressure away from futile landlord systems; and there must not be experiments with state farming and with collective farming, as for example, there has been in some measure in a country such as Ethiopia.

I don't make my living conducting a war with socialism and the Soviet Union, but again, we must recognize that there is an early stage of development to which socialism is irrelevant and capitalism—one might also add—is irrelevant, and that is before there is capitalism. That first stage of development is best when the cultivator is in charge—control—of his own land area. If you want to put it in rather blunt terms, Mr. Chairman, you can say this is the ideal form of exploitation, because the individual exploits himself.

As another example of what is important in the early stages of development, of which we make too little mention but which was taken for granted in our own country in the last century, then is the extraordinary importance of general education, of mass education. When we thought in the last century in the United States of what was needed, we thought immediately of public schools, elementary schools, and later, high schools. We should be aware that there is no country in the world with a universally literate, or generally literate, population that is poor. And there is no country in the world with a massively illiterate population which is in any way economically comfortable. This is a matter for the greatest emphasis, and it is something again, which in these last years, we have partially recognized in the Peace Corps and otherwise, but it has not had the central attention it deserves.

I have said that the emphasis must be on agriculture, and as to agriculture I would make two further points. It is extremely important that the FAO abandon the practice of keeping farm prices, prices of food products in particular, low, in order to cultivate the goodwill and the political support of urban populations. This, as other observers have stressed, is extremely damaging to economic development. There is a shortrun political advantage in doing this that has been seized upon by various of the governments in the less developed world, and that has had the advantage, perhaps, of providing a certain relief in the short run but it has been at the ex-

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pense of very great damage to agricultural incentives and agricultural production in the longer run.

One of the, I think, unexamined reasons for the great success of the Indian agricultural development—I will say a word about that in a moment—one of the reasons for its success is that the Indians, for the last 20 years, have followed the practice of guaranteeing investment in agriculture with a system of minimum prices, and the accumulation of food against a bad monsoon rather than keeping down prices at the expense of agricultural incentives and agricultural production.

Various of the African countries have followed the opposite practice. I don't think we can doubt it has been extremely damaging to their agricultural production.

That, Mr. Chairman, covers most of the matters that I want to speak about generally. There is one of importance that I want to address specifically.

I have said that we must not, without examination and without thought, move what is appropriate in countries such as our own to the under or less developed world—to the poor countries. We have a semantic resistance to referring to countries as poor, and we have invented all sorts of devices for evading that. The north and the south. The Third World, with some uncertainty, as to what is the First and Second Worlds. I think we would do well in a hearing of this sort to speak of the poor countries; that is their central and preeminent characteristic.

There are some things that it is extraordinarily important to move from our agricultural system to that of the poor lands, as I venture to call them. Grain hybrids, high-yielding genetic types of grain; soil and water management; pest control, are all extremely important, and can all be transferred from the rich countries to the poor and have indeed been extremely important for the Green Revolution, so-called, in India and Pakistan.

But there is much in our agricultural system which we must not transfer. Much of our supporting apparatus to agriculture as manifested in our colleges of agriculture and our extension services is of a very complex sort, and covers a very wide band of activity. And transferring that from Iowa to Zambia, or to India, to the Punjab, is wrong, an error. That transfer requires that we shelve a great many things which are not relevant to the less developed world.

If I might enter a personal note here, Mr. Chairman, this is a problem which I struggled with during my years in India. We had, at that time, a number of contracts with land-grant colleges, and very good contracts on the whole. But there was an almost irrepressible tendency to say that if something was being done in Champaign/Urbana, or Columbus, OH, or in Kansas, it must be transferred in that form to the Punjab. Much that was being done in those countries was not only irrelevant at the level of development that India had reached but it distributed attention over a very wide range of things at the expense of the concentration of the cultivator's attention on the things which were immediately important to food production, and immediately important to the avoidance of hunger. Namely, as I mentioned, better improved seed varieties, improved genetic forms, fertilization, irrigation, and pest

control. Those were the things on which we want to concentrate attention.

I think I am not out of order if I say that this matter was—and I will conclude on this note—this matter was one which was a constant bone of contention between my office and that of the colleges of agriculture that we had in India. There was a constant battle between my efforts to get concentration on these essentials and the tendency of the colleges of agriculture to assume that if it was appropriate to Ames, IA, it was appropriate to India.

I think it is also fair to say that when I departed there was a good deal of pleasure on the part of the AID program in India and a feeling of great satisfaction when Ambassadors arrived in succession who didn't make any pretense of concern with agricultural matters. We should know, as all people experienced in AID programs know, that the agricultural community of the United States, the professional agricultural community, is a republic unto itself and it does not take higher instruction from any quarter whatever.

Mr. Chairman, this is a general summary of the points that I have made at greater length in the paper that I am leaving with you today. Let me thank you again for allowing me to lend my voice to the extremely important enterprise on which this select committee is engaged.

Thank you.

[The prepared statement of Mr. Galbraith appears at the conclusion of the hearing, see p. 52.]

Chairman LELAND. Thank you very much, Professor.

Your testimony emphasizes investments in human capital, thus, the importance of education and achieving real agricultural growth. In your experience, what incentives can U.S. bilateral assistance provide to strengthen education systems and facilities in sub-Saharan Africa?

Mr. GALBRAITH. I think maybe I might leave that question to the other speakers, Congressman Leland. My experience has been extensively in Asia, and I have addressed myself primarily to that. If I had to emphasize one thing, it would be this terrible business of limiting agricultural incomes and prices in order to give an implicit subsidy to the urban population. This has been really the worst mistake of the agricultural countries in sub-Saharan Africa.

Chairman LELAND. You mentioned your experience in India and the desire of Western agriculturalists to transplant American agricultural techniques directly to the fields in India. Our AID program consists of funding for American university research on new technologies, improved seed varieties, and the like, to help developing countries improve food production.

How can we improve these programs to provide more appropriate and better technologies which will actually assist poor African farmers to increase their food production?

Mr. GALBRAITH. We must be awfully careful of the tendency, whenever we have a problem, to say, there must be a technology that will take care of it. We have a mystical religious commitment to technology, which we should deplore. The problem is not in finding new technology for Asian or African agriculture. The problem is getting a sensible transfer of existing technology, the right technology, as against the inapplicable technology and encouraging

those countries to proceed with the education that is the absolute essential for good use of existing technology.

Chairman LELAND. Thank you.

Let me now yield to my colleague, Mr. Daschle.

Mr. DASCHLE. Thank you, Mr. Chairman.

Mr. Galbraith, I am extremely impressed with your testimony this morning. In particular, I share wholeheartedly your view of what our price policy has done, not only to those in the poor countries, as you described them, but also to many of the farmers in our own country.

I think what we have done is accelerate bigness, certainly having to accelerated necessarily efficiency. I think we have accelerated this evolution toward hybridization that has ultimately brought us to a position of real peril when it comes to susceptibility, to disease, and other kinds of things that may not have happened had it not been for this incredible low price, or cheap food policy that we have enunciated and maintained for so long.

I was also interested in your comment in regard to the lack of ability that we seem to continually demonstrate in adapting their environment to our methods and vice versa. Clearly, what works outside of Peoria doesn't work in Latin America or in Africa. I think you properly assess our shortcomings but I guess I would like to have you elaborate on what you think would be ways in which we could overcome those shortcomings.

What methods of investment; what policies; what tools could we use to better assist poor countries in providing a better means by which to sustain themselves?

Mr. GALBRAITH. The problem, Congressman, is not in moving from Peoria, but in this case, from Champaign and Urbana.

Mr. DASCHLE. Excuse me, I stand corrected.

Mr. GALBRAITH. One or two things. There is first one sobering thought which we must always have in mind, which is that we can help, but we cannot command. One of the great errors of the last 30 or 40 years, which we continue to make, is the assumption that there is an American mystique and American power that allows us to take charge of cultures different and distant from our own. Having said that, I would come back, really, to my earlier comments, and say that we should put our emphasis on three things. First, the extension of education through the Voice of America, Peace Corps, and such direct aid programs as we can fund. I would repeat it again, the importance of general education, which I regard as absolute and indispensable.

Second, cereal production, for cereals, after all, in all cultures and all contexts, are far more efficient as a nutritional form than anything we get through livestock—although there are grazing opportunities in Africa and Asia where you cannot grow cereals.

And when it comes to cereals, soil and water management, the right price policy, not keeping prices down for the benefit of urban consumers. I am not in favor of that in the United States, either, for that matter.

One of the great sources of strength of our agriculture has been the price-support system—now 50 years old—which gave a guarantee to the farmer to support his investment in fertilizer, and his investment in machinery and investment in power. The most egre-

gious nonsense of our time, which is that there is some particular magic virtue in getting back to the market, except possibly in oil, is something which we should reject out of hand.

Mr. DASCHLE. I am going to take you to South Dakota with me for a couple of weeks.

I couldn't share your view more enthusiastically, especially in regard to the important role that the policies have had in the last 50 years in maintaining a continuity in spite of the tumultuous changes we have seen, not only within the economy, but certainly in the world market.

I don't want to use more time than I am allowed, but I would like to ask you one other question in regard to this policy, and it really has two parts.

First of all, do you see that your recommendations would fit as easily in Africa as they do in Asia?

And, second, if they do, what significance does our involvement in this regard have in terms of our own foreign policy? How much of a role should it play, and how effectively can it influence other kinds of factors in regard to our relationship with these countries?

Mr. GALBRAITH. I would generalize my observations from Asia to Africa. We must recognize that my own practical experience in Africa has been negligible as compared with that in India—with that in Asia, India, Pakistan, and Bangladesh.

The second point is a difficult one, and one that has a certain subtlety. In our relations with these countries—I think all of us who have served there are aware—nothing is so important as recognition of the desire of those countries, once they escaped from colonial rule, to keep their freedom. And nothing is so great as their suspicion of intervention by the so-called superpowers. This was what broke the Chinese away from the Russians; and North Africa, Egypt, Algeria, and Ghana, away from the Soviets. It is the problem of the Soviets in Eastern Europe, and it is the reason that we are regarded with suspicion in Latin America, Central America, and South America.

There was nothing in our relations with India or Pakistan in my time that was so important as suppressing the too-visible American hand. So that gets back to something I said before, that we must appear in this context not as a dominating force, but as a concerned and interested friend—available, but not with any obvious or visible display of power, or to the extent that we can conceal it, any sense of our own superiority.

Having said that, I must say one other thing—watching these matters over the years, particularly in India, Pakistan, and the Caribbean, I have to say that on the whole, we should recognize that Americans, in their relationship to the people of such countries, are probably better than most other nationalities, most other groups; our people go to these countries conscious of these problems that I have just mentioned. And on the whole, we are a more agreeable force in these countries than most other countries. This is a time of great self-criticism, and quite rightly, in our foreign policy, but there are some things that our people do well.

Mr. DASCHLE. I am sure my time is up. Thank you, Mr. Chairman.

Chairman LELAND. Mr. Smith, the gentleman from Oregon.

Mr. SMITH. Thank you, Mr. Chairman.

Mr. Galbraith, thank you for coming this morning. We are always privileged to have a gentleman of your stature before this committee.

I want to take you to a specific situation. I have traveled to Mozambique and Zimbabwe—one tilted toward the Soviet Union, one tilted toward the Chinese idea of communism. In both cases, are supplied militarily—although frugally—by the Soviet Union, in the case of Mozambique. And yet, we send those countries, in both cases, $40 million apiece each year, primarily through AID and other agricultural subsidies. I might add, that there are still 3,000, roughly, white farmers in Zimbabwe, who are the center of the production unit for Zimbabwe. They appeal to us to continue the aid.

What is your opinion about sending aid to avowed Communist ideologues, who, each day in the United Nations and every public utterance, condemn the United States, and yet, we continue to send them amounts of money—and rather large amounts—and continue to try to support particularly their agricultural systems?

Mr. GALBRAITH. I must say, Congressman, this is an extremely important question, and it is one that I in part covered in my full prepared statement.

Where, as in Ethiopia people are starving—men, women, and children—and in a lesser measure in Mozambique, I would continue to send aid, and have no hesitation.

Having said that, I would repeat what I earlier indicated in my prepared statement, that one of the great errors of our time has been in assuming that the structure of advanced capitalism, or the structure of advanced socialism and communism, can be moved to these countries that are in a pre-capitalist condition. This also implies the failure to recognize that the one form of agricultural production which is efficient, and which nobody seeks to change, is the owner-operated farm.

I said earlier, I don't make my living stirring up criticism of the Soviet Union. That is a well-paid occupation which I have not engaged in. But one shouldn't be in doubt that one cannot transfer the elaborate administrative apparatus and the low incentive apparatus of socialized agriculture to Africa. Nobody, parenthetically, would be more horrified at seeing that done than Marx, who once observed that socialism only becomes relevant after there is capitalism.

Mr. SMITH. Just a followup question, Mr. Chairman.

Did I hear you say, Mr. Galbraith, that if you had in Ethiopia—which is a starving nation, and that we ought to continue aid, and I agree with that—did you make it separation between that situation and in Zimbabwe, which is basically feeding its own people, and I ask you the question: Would you send $40 million a year to Zimbabwe, which is a Third World nation, but recovering?

Mr. GALBRAITH. I think I would, Congressman. I would take it away from the Contras and send it to Zimbabwe. I am sure you would agree with me on doing that.

Mr. SMITH. You would take it from where, sir?

Mr. GALBRAITH. From the Contras.

[Laughter.]

Mr. SMITH. Oh, yes; I understand that point exactly.

I guess the point I was trying to make is that that is not just our only portion of foreign aid, which is about $9 billion, of course, as you well know; and I was trying to get a philosophy from you rather than a distinct position on the Contras. [Laughter.]

Mr. GALBRAITH. I can well understand your desire to avoid that subject.

Mr. SMITH. I totally appreciate your point, and I am thankful that you are not on the floor of the House of Representatives. [Laughter.]

Chairman LELAND. Professor, you might take some comfort in knowing that the gentleman from Oregon voted yesterday to knock out money for the Contras.

Mr. SMITH. An oblique shot, I must say.

Chairman LELAND. Professor, you mentioned in your testimony—and Hunger Committee research has found that women in Asia and Africa do most of the agricultural work and receive very little agricultural training. For the most part, social and cultural constraints have contributed to this phenomenon.

Based on your experience in India, how can agricultural programs better target the needs of women farmers? What can the United States do to foster institutional change which will give African women greater access to agricultural training and extension services?

Mr. GALBRAITH. I say somewhere in my testimony, Mr. Chairman, that the first recognition I had of this problem—I am sure others had seen it earlier—was when I went to agricultural meetings in India, meetings on better agricultural methods and they were always attended, 100 percent, by men. Then when I made my way back to New Delhi, or wherever I was going, and looked at the fields, they were all but exclusively populated by women doing the work.

There is no magic formula here. It is a problem that we must recognize. We must have motivated women in our aid effort. We must use any friendly advice that we can on this. And we must, particularly in training programs and education, make sure that it is blind as to sex—is available equally to men and women. We are not going to get women in these countries out of heavy-duty work. But we must surely recognize that this is a problem—again, recognition for the role which women have in these matters.

Chairman LELAND. How important are price incentives to rural producers increasing food production?

Mr. GALBRAITH. There is a very important FAO study on this subject on which I have drawn in my testimony. I have emphasized population control, which is something which is not going to be an easy shortrun measure, I also feel that getting away from keeping urban prices low at the expense of agricultural producers could be just about as important as anything.

And going back to what I said before, certainly one of the successes of the Indian policy was that they reversed it. They set floors; bought up what was necessary to maintain the floors; and maintained, therefore, a strong agricultural incentive structure.

Chairman LELAND. Are there any other questions of Professor Galbraith?

[No response.]

Chairman LELAND. Professor, thank you so much.

I would like to introduce John Sewell, president of the Overseas Development Council. Recently, the Overseas Development Council, in conjunction with the Council on Foreign Relations, completed a report on African Development Strategies, referred to as the Compact for African Development.

[The report referred to above retained in committee files.]

Chairman LELAND. Mr. Sewell will discuss effective mechanisms for providing sustained, long-term agricultural assistance to poor farmers in Africa.

Mr. Sewell, welcome.

STATEMENT OF JOHN W. SEWELL, PRESIDENT, OVERSEAS DEVELOPMENT COUNCIL

Mr. SEWELL. Mr. Chairman, I want to say how grateful I am to be invited to testify before this committee on this very important subject, and to commend you and your colleagues for focusing attention on the crucial role of small farmers in increasing agricultural production.

I would like to summarize the statement that I gave to the committee staff yesterday.

Chairman LELAND. Without objection, your full statement will be included in the record.

Mr. SEWELL. And to just hit a few points in the next 5 minutes or so from that statement.

That statement draws very heavily, as you indicated, on the report of the Committee on African Development Strategies, called a Compact for African Development, which was released last year by a group of distinguished Americans, led by Ambassadors Donald McHenry and Larry Eagleburger, who had met for 1 year to look at the issue of what the United States should be doing to support African development in general. The report also draws from 20-some-odd studies that that group commissioned that will be published in a few weeks by the University of California press.

I particularly want to go beyond the generalities to raise a few issues, some of which Ambassador Galbraith has already discussed, and to talk a little bit about Zimbabwe because it really is an interesting case study of what can be done in dramatically increasing agricultural production.

What I am going to say draws on these various documents but, of course, it is my own personal statement, not necessarily that of ODC.

I think that the key issue for Africa—at least in the short run—is how food production can be increased; how food security for the vast majority of Africans is ensured so that people simply have enough to eat. Of course, in Africa, as you so well said in your opening statement, we are far from that goal. The only region of the world where per capita food production has decreased, not only due to natural disasters, with which we are all familiar, but to very bad policies over the course of time.

In Africa, small farmers, no matter how defined, are crucial because they make up somewhere between one-half and three-quarters of sub-Saharan Africa's population and produce 70 percent of

the food. So, therefore, when one talks about small farmer production in Africa, it is really the core of Africa's agricultural problem.

Let me address just a few issues and not cover all those that are in my statement that I think are germane to your very important deliberations.

First of all, there is virtually no argument among specialists, within Africa or outside, of the key importance of strengthening the agricultural sector. That is no longer an issue anymore. Whether one looks at the documents of the Economic Commission on Africa, the Organization of African Unity, the World Bank, the central issue is how is agricultural production going to be increased in Africa.

I won't go into the tragic statistics which you mentioned earlier—we all know them. But part of that agreement is that African nations are going to have to increase that food production through developing appropriate policies to encourage small farmer production. It is the only way that we are going to see any improvement in the situation in the near future.

Central to all of that is the question of prices. But while adequate prices are a necessary condition, they are not sufficient. There are a number of issues that are equally important. One only has to look at a country like Senegal which has relied almost totally on price changes to increase agricultural production, only to find that by a combination of lack of incentives and bad weather agricultural production per capita has actually dropped.

I do want to focus on Zimbabwe, which, along with countries such as Malawi, Cameroon, and the Ivory Coast, have made significant gains in agriculture—to point out that things can be done when a government is committed and has the ability and resources to deal with this particular issue.

Zimbabwe is very interesting. Independent in 1980, after a long and very costly independence struggle, the government immediately focused attention on increasing food production among small black farmers. They increased prices some 40 percent immediately after independence in 1980 and got a considerable jump in production and output only to be bushwhacked over the next couple of years by bad weather, which hit all of Africa, both southern and in the Sahelian region. But when good weather returned again in 1984-85, these successful policies again bore fruit.

They raised the prices for corn, which is the staple food production crop; did it before the crop was to be planted so the farmers would know what they would get for their price. The results are really dramatic. If one looks at Zimbabwe's maize production over the 5 years, the percentage of that marketable surplus produced by small farmers has jumped from something like 10 percent of their crop to over 40 percent of the marketed surplus crop. That is a dramatic jump.

It happens in Zimbabwe's case to also be true of cotton, which is one of their important export crops.

But the story doesn't end there in the sense that the magic formula was only increasing prices and giving incentives to the small farmers. There were a whole host of other things that were important. One of which is a very important agricultural research capacity, which goes way back—at least in Zimbabwean terms, back to

the 1930's, as a matter of fact, when agricultural research specific to Zimbabwe's needs began; this research led to the development of a set of hybrid seeds which were first introduced after World War II. And you had, over that period of time, an agricultural research capacity, which particularly in African terms is really very good.

But there are two other crucial components in Zimbabwe's success story: One of which is improvements in infrastructure; and the other is a set of institutions within the agricultural sector in Zimbabwe which are very impressive. Infrastructure in Zimbabwe's case, by the way, doesn't mean roads, but rather, a marketing system, which could be turned to the advantage of small farmers.

What the Zimbabweans did was very interesting, to take one step back. Zimbabwe, by one definition, had a very equitable agricultural system—40 percent of the land was reserved for the large white farmers, and 40 percent of the arable land was reserved for small black farmers.

The only problem was there were at independence only about 6,000 white commercial farmers, and there were somewhere between 600,000 and 800,000 black farmers. So you had an average white farm of 10,000 acres and an average black farm of 9 acres. There were a large group of farmers for whom the system had not been open for reasons of domination by the whites up until independence. But you had a system that could be turned to the advantage of the small black farmer once political power had been transferred.

What the Grain Marketing Board—which happens to be a very efficient state organization—did is simply extend its outreach to the small black farmers in a very straightforward way. White farmers, of course, could bring their surplus in trucks and a variety of other ways to central marketing points; small farmers couldn't.

You will find all over Zimbabwe retail stores with signs saying that they are the pickup point for the Grain Marketing Board to the point that there is probably a grain marketing point for farmers within 10 kilometers of small farmers. You can walk or carry it on a draft animal rather than go a long distance to market your crop.

Second, Zimbabwe is blessed with a number of very strong local organizations. The Small Farmers Union is a very powerful organization throughout the country. There are ways that farmers can be reached, both up and downward—that is, downward with extension and information; and upward in terms of political pressure. Probably over half of Zimbabwe's small farmers belong to some kind of local group or organization.

When you take those elements along with the ready availability of fertilizer and credit for farmers, you get an immediate response in terms of production, which, as I said, was extremely impressive. Let me just give you one figure. The number of farmers registered with the Grain Marketing Board at the time of independence was about 130,000. By 1984, nearly 350,000 farmers were registered with the Grain Marketing Board. And all of those, of course, were Zimbabweans who were small farmers.

What are the noteworthy lessons of this? One, I think, is that a successful agricultural policy directed at small farmers consists of a whole package of measures, not just getting the prices right.

I don't mean to underplay the importance of getting the prices right; it is terribly important, but it is not the only aspect of increasing small farmer production.

The whole question of infrastructure, educational system, extension, and so on, and so forth, is equally crucial.

Therefore, both the public and the private sectors have an important role to play just as they did in our own agricultural development. This means that in areas where the private sector really can't support the growth of agricultural production, where the marketing mechanism is not there in private hands, and the private provision of credit, fertilizer, and seeds are very limited, the government has a very important role to play.

Therefore, it seems to me one of the policy changes looked at from the outside is how you support the development of a strong private sector while at the same time supporting the very useful roles that governments can play in the agricultural field.

Finally, I would argue that we must ask—and this has, I think, aid allocation questions as its crucial element—is the government committed to this issue? There is no argument that the government of Zimbabwe is committed to increasing agricultural production from black Zimbabweans who have small farms, and that political commitment to this, which is the right thing to do in that country, clearly has a great role to play.

Let me mention—leaving Zimbabwe for a minute—several other issues that are important that were already discussed this morning. One is the crucial role of women. Given the role that women play in sub-Saharan Africa, growing a large portion of food crops, programs that do not recognize that fact are doomed to fail.

This conclusion has a whole set of implications for policies in terms of a variety of areas in technology and in energy. Women's role in Africa, as elsewhere, women's time, is consumed either with processing food—and in many cases with looking for water and whatever energy sources are available, usually firewood. Therefore, any rather small-scale and inexpensive technologies that speed that process are of great advantage. For instance, if you take a crop like cassava, which can be nutritious and is easy to grow—technologies that enable women to process it faster, simple hand grinding mills, and a variety of other things, are terribly important. The same thing is true of millet or sorghum. So is easier access to drinking water so you don't have to walk so far to get water; so is easier access to energy technologies which will cut down the time that people search for firewood and fuel. And, of course, that also has a very advantageous environmental impact as Congressman Gilman referred to earlier. And particularly it is crucial in sub-Saharan Africa to look at the question of education for women in terms of basic literacy and numeracy because of women's importance in the agricultural sector. Aid programs, speaking in general, have a very important role to play here.

The other issue I would like to raise in terms of Africa is the very important role that research institutions can play in African agricultural development. The tragedy of policy toward sub-Saharan Africa is that the effort has not been put in since 1960 to build the kind of institutions that were built in Asia. The ultimate goal is for Africans to have a series of institutions to do their own re-

search on their own agricultural problems, and produce solutions that are specifically designed for African needs. And, of course, even African needs is a great misnomer as Africa, as you all know, varies widely between the kind of agricultural problems of the Sahel and the agricultural problems of southern Africa.

There is a need here for support for research programs which, frankly, are only going to pay off over the long run. You don't train people, you don't build institutions, and expect them to produce overnight—and we should be looking for the long haul in this area.

It is particularly important in Africa because in some countries AID programs have placed the cart before the horse. We have emphasized extension programs and ways of getting inputs to farmers without having inputs that will dramatically increase production in situations specific to individual African countries. Here, research which deals with the challenges and needs of small farmers, and emphasizes their problems, and their potential, is particularly important.

Let me just say that one of the issues that is terribly important for Africa is what is done for nomadic peoples. An important part of Africa's population still exists in its traditional nomadic style of agriculture, maybe some 20 to 30 million people who follow this lifestyle, particularly in the Sahelian area, where very little has been done about buttressing the traditional systems of those people. And efforts to integrate them into the system by telling them that they should drop their own culture and their own style of living are doomed to failure.

One of the challenges, therefore, for our AID program, is to look at those issues in these terms.

Let me close by saying how important the United States is to this effort. In effect, in an ideological sense, I think, or in a policy sense, we can say we have won the war—that the realization within Africa is that they do have to change their policies; that they do have to put an emphasis on agriculture is almost universally recognized at this point. One can see, for instance, this included in the new World Bank report that was released several days ago, that this really is an opportune moment in terms of African governments' realization of what they have to do over the next period of time if their development—no matter how one defines that term—is going to succeed.

In that climate, the role of what the outside world does to support that development is particularly important. Don't let me leave the impression that I think what the outsider does is the dominant factor. It is always going to be on the margin compared to the commitment of governments and people to their own development, but in this case, the margin can be very important.

There is a special session on Africa coming up at the United Nations General Assembly at the end of May. The first time the United Nations General Assembly has ever devoted a special session to one particular continent.

I am not sure that we in this country really fully perceive that African governments by and large stand ready to act. And unless we respond in one way or another, the moment may pass.

Now, I am fully cognizant of the pressures that all of you in Congress face on the budgetary side, and we have laid out in the paper we attached some suggestions for low-cost responses by the United States, because the budgetary pressures are going to be very great.

But let me suggest here the fact that this is a very important issue for the United States and that we should be doing all we can to encourage African governments at this point. It has relevance for a whole set of issues that you are going to face in the near future. For example, what is going to be the U.S. contribution to the World Bank's International Development Association which comes up for replenishment this year? What is going to be our stance toward the U.N.'s fund for IFAD, the International Fund for Agricultural Development, which is perhaps the most effective international organization dealing with small farmers?

What is going to be the reallocation of funds within our own AID program as we deal with the constraints of Gramm-Rudman-Hollings?

I would like to call your attention to the fact that there has been a bill introduced in the Senate—a working bill—S. 2208, by Senators Kennedy and Kasten, which attempts to set up within the USAID program a framework which would enable USAID and the other agencies to deal much more flexibly with African development over the long run with the full realization that financial resources may be constrained over that period of time.

Let me say in closing that I am extremely glad that you are dealing with this issue. It is crucial. There is really no way we can argue that it is either in our direct economic self-interest, because our economic interests in the short run in Africa are limited; nor can we argue, it seems to me, that sub-Saharan Africa has the same critical strategic importance as other parts of the world, but it is the right thing to do.

In a sense we have seen magnificent achievements in large parts of the Third World. Your first speaker, I am sure, had to argue strongly when he was Ambassador to India that India was not a basket case; and, of course, he was proven right, with the increases in Indian food production and manufacturing capacity. The same thing can be true of Africa over the long run if we are willing to stay the course and provide the necessary support.

Thank you.

[The prepared statement of Mr. Sewell appears at the conclusion of the hearing, see p. 69.]

Chairman LELAND. Thank you, Mr. Sewell, for your contribution.

The example of Zimbabwe's successful efforts to increase agricultural production is certainly inspirational.

What attempts have other African countries made to follow Zimbabwe's progressive approach to agricultural development?

Mr. SEWELL. You have had attempts, as I said, in the Ivory Coast, Cameroon, Kenya, and other countries to apply the same sorts of policies. Judgments of long-term trends particularly when you get into Sahelian Africa and East Africa, are very hard, of course, because of the vagaries of weather; nobody knows whether this recent drought was an aberration of the weather pattern, or whether we are onto some long-term decline; you can get any argu-

ment you want. So the success of the policies is hard to measure over the last 10 years simply because of the vagaries of weather.

But I think you will find in a number of different places that individual African governments and individual areas have done quite good things. That doesn't rule out the fact that the overall record, as we all know, has been dismal over that period of time. But the emphasis has tended to come out of support for the efforts of small farmers to increase their production.

That raises an additional point. One of the things that is terribly important is that research and extension build on the existing strengths of African agriculture. African farmers work damn hard; they are very smart farmers; and they are very risk-avoiding farmers, for good reason, because the price of failure is not to move into town and look for a job—the price of failure is starvation.

In each case, because African farmers know their own climate and their own environment, one ought to be looking to build on the strengths of their own system and their own culture, which varies widely across Africa, in order to enhance output.

Chairman LELAND. How can U.S. assistance best guide African countries to implement programs and policies such as you described in the case of Zimbabwe which incorporate producer price incentives, infrastructure marketing improvements, education, and extension, and research programs tailored to the needs of small farmers, both men and women?

Mr. SEWELL. I think that to the extent that you want our aid program to put emphasis on increasing agricultural production based on small farms, you have got to bet on those countries that seem committed to that strategy. That has implications, first of all, for your country allocation. And in this case, Zimbabwe, of course, can absorb a fair amount of money quite well because it is committed to the right agricultural policies and it started off in better shape for various reasons, than most African countries.

Second, you have got to look to build the institutions in Africa that are eventually going to pay off in terms of long-term agricultural production.

One of the tragedies of U.S. aid to Africa is that we have gone in cycles. We discovered Africa in 1960. We forgot about it in 1966 when there was a report—the Karry report—which indicated our activities in Africa should focus on six or seven countries. We sort of discovered it again in 1972, and we discovered it again in 1984.

Although I have a strong commitment to the reforms of the AID program that were made in the 1970's, it is clear that for various reasons the people in the field believed that they could not support agricultural research institutions, those kinds of long-term infrastructures, which are things we do well. We do know how to train people. We do produce extremely good agricultural scientists. We do train a whole variety of people that are needed in agricultural production.

Third is, that when you look at our support for international activities, we must continue our support for the Consultative Group on International Agricultural Research, support for IFAD, support for IDA. These all are terribly important.

We have supported in Zimbabwe—and I have Zimbabwe on my mind because I was there a few months ago—the educational

system with its very innovative way of training people. We are supporting the development of agricultural research institutions. We are supporting the rural credit institutions.

The problem is, if you have a government that is not very committed to this, your dollars, except on the margin, and except for activities like the Peace Corps and the African Development Foundation, may not do very much good.

We have supported development efforts in Zaire for a long time now, and I am not sure that one would really want to stand or fall on the results of a long-term U.S. investment in aid to Zaire on development grounds.

Chairman LELAND. Development and a lot of other things, too. I had a real bad experience in Zaire and I wish that there could be something better done in that country with the moneys that we continually send to Zaire—our so-called friend.

Mr. SEWELL. Let me make one additional point, if I may. Although it is clear that African governments have made very unwise choices, aid donors in general could do a lot better. Given the way most aid is provided to sub-Saharan Africa, it is very difficult for Africans to manage it efficiently. A story, which may be apocryphal, but at least is directionally true, goes that the planning minister in Burkina Faso had visits from 262 aid missions during 1983 and 1984. There are an awful lot of aid programs in Africa. They each have their own particular desires. They have their own accounting schedules. They have their own timetables, their own parliaments.

I would argue that you could get a lot better result for the available aid moneys for Africa by working very hard on coordinating the efforts of donors. Even Kenya, if one believes the newspaper reports, has said, well, we may not want more aid now because it is damn difficult to manage, given our limited resources—and Kenya is a comparatively well-managed country. Therefore, there is a lot of work to be done on the donor's side if you are seriously committed to long-term development in Africa.

Chairman LELAND. Very good.

The gentleman from Oregon, Mr. Smith.

Mr. SMITH. Thank you, Mr. Chairman.

Getting away from the question of which philosophy sub-Sahara Africa might choose in relation to their government, let me ask you: Should the United States support Third World countries beyond their self-sustaining level of feeding themselves to the point that they become very fierce competitors with us, recognizing that we are in a surplus agricultural situation at the moment?

Mr. SEWELL. I am glad you raised that question, Congressman Smith, that is the $64,000 question. It is not an African question at the moment, however, because even if we succeed, we have to go some decades before that would come into play.

The amazing thing, of course, is even in the last year, we suddenly realized that we have succeeded and we are not sure we like it. Agricultural production all over the world has jumped—leave the European Community aside, and the Saudis growing wheat at whatever it is, $1,000 an acre, with irrigation systems from the Dakotas—that the world has changed in terms of agricultural production.

Now, what we need—and I am not going to extend beyond my area of expertise here—we need a serious look at the implications of this new situation. What we are really talking about is countries are not importing as much food. But if you take a country like India and other developing countries, while it is true they are not importing food, it is also true the nutritional level is very poor. When you talk about food self-sufficiency it is in a trade aspect rather than in a human nutrition, human well-being aspect.

If Indian incomes jumped in the rural areas, or if income was redistributed you would find that India's food self-sufficiency might drop very rapidly as people bought more food, as most poor people do with additional income.

Second, you have had extraordinarily slow growth in the Third World since 1980. In fact, you have had global recession. And the impact on U.S. exports, particularly agricultural exports, but also manufactured exports, has been drastic. My own organization's research shows that—the United States lost nearly 1.4 million jobs related to exports to the Third World because the powers that be have been telling Third World countries to cut their imports and expand their exports. We get it both ways. We lose our exports and we get a surge of Third World imports in the United States. This is Latin America, by the way, predominantly, and Asia to an extent; certainly not Africa.

Now, the question is what happens if we are strong enough and wise enough to help get economic growth going again in the world. Most of the research from the 1970's indicated that as Third World countries grew, they consumed more food because people moved up the chain in what they consume. They started to eat bread, they eat chicken, meat, and so on and so forth. So the biggest importers of food and of the American agricultural surplus tended to go in large part to Taiwan, South Korea, a whole group of countries that economically were doing very well.

The question of where our markets come from, both for our agricultural exports and for our manufactured exports is terribly important. I would argue that one of the big constraints, one of the very big constraints which has hit American farmers very hard, has been the fact that purchasing power in the Third World, our major export markets, has dried up due to global recession.

Now, the $64,000 question is: If that constraint is removed, how much of this problem will be alleviated? It certainly will be for the Caterpillar tractors and the Boeings and the Westinghouses; whether it is for American agricultural producers or not, needs a very hard look.

Mr. SMITH. Let me just take you to Zimbabwe, and I understand that the United States is the No. 1 importer of Zimbabwe tobacco, which is a cash crop for them, obviously.

Mr. SEWELL. I don't believe that we should be supporting agricultural production in the Third World for commercially marketable crops that are in surplus. In the African context, we are really talking about—the exception is Zimbabwe and a few others—crops that are either going to be consumed within the country or consumed regionally, because it is going to be a long time before Africa is in any sense food self-sufficient.

Mr. SMITH. Sure.

Mr. SEWELL. But we have to look at that issue as a set of national policies. It is not only true of agriculture, by the way, it is true of lots of other industries in this country, if we are going to be competitive and keep our markets. That should be a strong element in the political debate. It is terribly important, by the way, for U.S. relations with the Third World, because those—other regions of the Third World, again, not Africa—other Third World countries are our fastest growing markets. They were good markets in the sense they were buying our agricultural production and our high technology products. And it has all dried up in the last 5 years because of global recession.

Mr. SMITH. My small pique at Zimbabwe—I listened to particularly white farmers' plea for continuation of aid, and they were pointing out that they needed machinery and parts, primarily. And that was where most of, as I understood, our assistance was going, particularly to Zimbabwe. But my question is, if we are trying to support small farmers, have we misdirected our aid to Zimbabwe since obviously the guy with 10,000 acres can use a tractor, and the fellow with 9 acres cannot? Are we assisting the white farmers in Zimbabwe and not assisting the small farmers in Zimbabwe?

Mr. SEWELL. No, I think you would find, when you look at the totality of U.S. aid over the last several years to Zimbabwe, it has been quite balanced. One of the constraints was how you got Zimbabwe's economic infrastructure going again. And one of the real constraints they had was the shortage of spare parts, not only, by the way, for the commercial farmers, but for industry. They are one of the few African countries that really has a solid industrial base—partially thanks, by the way, to sanctions, which forced them to get their own factories for a whole variety of things.

It was true not only of the commercial white farmers, but of a variety of manufacturing institutions—they just didn't have foreign exchange for spare parts. And part of the aid program is to make foreign exchange available so that imports can come in not only for commercial farmers but for other manufacturing sectors.

You see it, by the way, on farms. We spent a fascinating couple of hours with gentlemen described to me as panel beaters. I couldn't figure out at first what panel beaters did, but they are the people—extraordinarily skilled mechanics—who cannibalize vehicles and put them back together again. The premium on spare parts in Zimbabwe is really quite striking—and these panel beaters get vehicles, both cars as well as agricultural vehicles—going again.

A great deal of the aid, however, has gone to the activities that either in the short run or the long run are going to support the majority of black African farmers. By the long run, I mean building agricultural research institutions in the country, building training institutions in the country; supporting the remarkable system of training teachers to expand education. They have got a system where you go to school for 1 year, go out and teach for 1 year, come back to school, and spend your fourth year teaching again, which gets you a lot of teachers faster and gets your people used to teaching rather than sitting in the university. And they are providing rural credit.

Now, our contribution was useful. The real key issue was the ability and commitment of the government for political as much as economic reasons, because that is where their power base was, the small farmer community. And, frankly, the infrastructure was already there, so that the system could be turned around. You couldn't have recreated from 1980 to 1985 agricultural research that began in the 1930's, which gave you crops that were specifically adapted to Zimbabwe's agricultural circumstances.

And the challenge, of course, is that so far the white agriculture community seems quite satisfied. If my information is correct, people are coming back in. There is a net white inmigration into Zimbabwe, which is remarkable. What it means is that you are able to make the transition to majority rule in a country with a minimum of human cost. I don't mean to overplay it, but the lack of racial enmity is remarkable in the country. Ian Smith, when I was there, was wandering around downtown shopping without anybody saying anything. It is really quite a remarkable success story in that regard.

Mr. SMITH. Thank you, Mr. Chairman.

Chairman LELAND. Maybe South Africa can borrow the same kind of transition.

Mr. SEWELL. It would be nice to think that.

Chairman LELAND. The Chair would like to now recognize the gentleman from California, Mr. Fazio.

Mr. FAZIO. Thank you, Mr. Chairman.

Mr. Sewell, I think we have probably amply indicated a concern that we have about environmental degradation that is sometimes brought about in Third World countries certainly has occurred in Africa through our aid programs.

Ambassador Galbraith, I read, touched on policies that can impact on the role of women. How do we go about administering through our aid programs the compliance with these various policy goals that we all share without totally creating cumbersome mechanisms that just overbureaucratize the process and really prevent us from carrying out the goals that we share?

Mr. SEWELL. Congressman, it is one of the central questions in Africa, particularly in the Sahelian region, but true in other areas too. I do think that aid programs in general are much more sensitive to that issue now than they were 10 years ago, thanks to continuing pressure from Congress and various other sources.

There is no easy solution. In the first place, I indicated earlier, I don't feel confident enough to say whether the climatic conditions, at least in the Sahelian region, are an aberration or the beginning of a long term and worsening trend. I just don't know.

There are both major measures and small-scale measures one can take. The small-scale ones, of course, if you are thinking about firewood and energy, is to push harder than we have on renewable sources of energy. It is not easy, by the way, because we have tried a number of different technologies. But there are a whole variety of ways—whether you are talking about wood lots and fast-growing trees, or better stoves that one can deal with—and AID is dealing with those and as are other institutions.

Second, and this is a more difficult one, is the whole question of nomadic pastoral people and the impact that herds have.

And, third, of course, is the whole question which we have been discussing in this country in the last 12 months—the population program. I think there is a growing realization in Africa that the sense of openness and lots of land, and so on and so forth, is deceiving, and that people have to begin to address family planning with all its broad ramifications. I think the trend is running that way, although not as fast as one would like, in government acceptance.

Zimbabwe, by the way, also is a good case because it has got the best family planning organization, I am told, in sub-Saharan Africa. So that is another aspect of it. It is one of those extraordinarily difficult issues, that one has to keep pushing on very hard.

The fourth aspect of it, of course, is more difficult because it is more expensive, and also more environmentally controversial. There are tremendous river basins in Africa still—undeveloped. Several years ago, I was up on the Senegal River basin where the dam at the mouth must be in operation now, and the dam way up in Mali must also be close to operation.

This is a difficult area and, frankly, I am not sure where I come down on it. Traditional agriculturalists take advantage of the flood stage, and as the flood goes down, people plant two or three crops, and grow a considerable amount of traditional crops and market crops, and lived decently well. That year there was no flood, period. And all this vast extent of plains that would have been flooded and green at that time of year, were just sandy and barren.

Now, is this a long-term aberration, or is this not? Will the dams help or will they be, as dams have been elsewhere, more environmentally stressful than helpful? We know how to build dams. The question is whether we do it or not. But what do you do with the people in the area? Do you move them out and move them into the south and center of Senegal, which also is environmentally stressed for other reasons.

It is the most difficult question—unless you can get a fix on what the long-term trends are in the weather. Because if we are into a long-term trend—I am talking about the Sahelian region—you may have to talk about abandoning areas for some considerable period of time. Even if it is going to resume on a 50-year cycle, that is a long time in terms of the human lifespan. Or you may have to be willing to invest a large amount of money in agricultural activities in terms of irrigation and river basin development that is going to be very hard to find in this day and age.

Mr. FAZIO. We are wrestling with some of these issues in our country right now, as a matter of fact.

Mr. SEWELL. That is right.

Mr. FAZIO. What about the—I thought you were going to touch on it when you mentioned family planning—the issue of women and discrimination and policies that will either alleviate some of that burden or at least not buttress it?

Mr. SEWELL. Here the outsider treads warily. You are dealing with social patterns that we are only beginning to come to grips with in our own country, let alone in other countries. But our approach has two aspects, one of which is to look very carefully at all U.S. Government activities, whether you are talking about family planning, the role of women, and make sure that women get full access. And I would argue in terms of agricultural programs, more

than full access in a 50-50 sense, because women are most of the farmers—access to training, extension, credit, and so on and so forth. Where that isn't true, we aren t doing our job.

Therefore, anything that we support, it seems to me, should put a heavy weight on those issues. If the recipient country doesn't like it for cultural reasons, that is their problem.

Second, I happen to believe very strongly that in effect we have succeeded in family planning. It wasn't all that long ago that most world leaders wouldn't even discuss the issue, nor would the U.S. Government, you will remember, in the Eisenhower era. There is now more demand for family planning programs than we can meet. That is a great tragedy, particularly in Africa, where the trend is running the other way. But we shouldn't kid ourselves because it is going to take a heck of a long time.

It can be speeded up, both by family planning and by the right kind of equitable economic development.

But to get people to change their desire to have large families is going to take some time at least, and it is going to have a whole range of things to do with improving infant mortality. And here the role of women is crucial. If there is one variable that seems to be very important through its effects on other areas, it is education of women, and employment of women.

If you had to bet your money on one single policy—I wouldn't do that—but if you had to bet on one single policy dealing with people's desires to have smaller families, it is improving the situation of women, both in an education and employment sense.

Mr. FAZIO. Thank you.

Chairman LELAND. The gentleman from California, Mr. Panetta.

Mr. PANETTA. Thank you very much, Mr. Chairman.

Let me just ask briefly on the question that Bob Smith raised. We really do have an inherent conflict in policy and basic conflict is one in which at the present time we feel that our best areas in terms of agricultural sales through the Third World, and that seems to be the emphasis—at least in terms of developing stronger agriculture in the United States, is the ability to go out into those marketplaces as the great potential marketplace for the future.

At the same time, we have the concern about what are we doing in terms of developing their own agriculture. I just wonder what the analysis would be in terms of the future of that kind of inherent conflicting policy that I think exists within the United States at the present time.

Mr. SEWELL. Congressman, I would be less than honest if I told you I knew the answer to that question—I don't. But let me make what is a semi-informed guess.

A good part of American agriculture consists of extremely efficient producers. We know that. This is thanks to high technology, thanks to the hard work of American farmers and the whole system. The real problem—but, again, it is not an African problem, the lack of purchasing power in the Third World at the moment. Most countries are in a position where they cannot buy more. And in the short run—and by the short run, I mean the next 5 to 10 years—if you released that constraint of no purchasing power, you will find that American exports in general, and I would argue agricultural imports, will jump back up.

This is true of Mexico. Mexico has done a marvelous job of balancing their trade budget by not buying anything and exporting one hell of a lot. And it is true of Brazil and it is true of most of the big debtor countries.

Our markets—our agricultural markets—and our other export markets have been in the fast growing, newly industrializing countries, the more advanced developing countries. Of the top 20 U.S. trading partners, U.S. export markets, 10 or 11 of them are Third World countries. Now, they, almost without exception, are also the big debtors, and the big borrowers from commercial banks.

I would just repeat myself, over the last 4 or 5 years, they have cut back drastically on all of their imports, including American agricultural products.

Now, my guess is if you took an optimistic scenario on global economic growth, you would find that the prospects for American agriculture and other American export industries get very much better. The real question is, if you look at America's long-term economic interests, which have to be focused a good part on international areas, how you get global growth going again.

Africa, good parts of Africa, leaving concessional food aid and Public Law 480 aside, are only going to grow slowly as markets for U.S. exports. There are exceptions—Nigerians, so on and so forth.

Now, I firmly believe that American agriculture will be competitive. It may move up-scale. It may move into a whole host of products like processed foods. But prosperity in the world is going to increase the market for American goods providing—providing—that Americans really want to export. And there are industries that really haven't put much effort into exporting, of which agriculture is not one. But the markets will be out there.

Mr. PANETTA. Let me just ask you quickly. You have identified a number of areas that have to be addressed, and I guess the best of all worlds it would be nice if we could address infrastructure problems, overpopulation problems, education problems, and all of the other steps that have to be taken.

If you had to choose—if you had to identify the one area where we would get the most back for our investment in terms of the goal of trying to improve agriculture in these countries, what would you identify as the principal focus?

Mr. SEWELL. A willingness to support over the long term two things—if I can have one divided in half. First, a willingness to support over the long-term institutions, research institutions and training institutions, in Africa, both national and region-specific to Africa so that over some timeframe you can see that Africans are, as Indians and others now, are doing their own work.

Second, the other half of my first point, is that I would look for the areas of opportunity where governments and institutions are really committed to small farmer agriculture. And whether it is credit, or whether it is seeds, or whether it's extension, help them relieve their real constraints.

The World Bank report indicates really dramatically that Africa really can't import anything at the moment. So if you want seeds, or you want fertilizer, let alone commercial agriculture inputs, and small farmer inputs, they just don't have the money. Therefore, you can be as committed as you want, and be purely constrained,

by no foreign exchange, from buying the inputs that are very necessary for agriculture.

Mr. PANETTA. Thank you.

Chairman LELAND. The Chair would like to advise members that they have about 5 minutes to catch the vote on the journal. The Chair is going to proceed, however, with the excuse that this is much more important than just a procedural vote.

Let me ask you, Mr. Sewell, you mentioned just before you ended your official testimony that there are not the institutions in most of the countries in Africa compared to those in Asia. And because of the institutions in Asia there was some ability for the development of solutions to agricultural problems.

Can you elaborate on that just a bit?

Mr. SEWELL. Ambassador Galbraith may be much better qualified to talk about India's and Asia's success. That is not my area of expertise. But my understanding is that for a long process, not just USAID programs, or other aid programs, going back some considerable period of time, there have been concerted efforts to build up the agricultural research technical assistance capability within Asian countries. Part of it comes out of the CGIAR, the Consultative Group on International Agriculture Research, the wheat and maize, and rice institutes, and the work they have done over the period of time.

Part of it in Latin American terms comes out of private institutions. It was the Kellogg Foundation in Michigan that made a commitment to Latin American agricultural institutional building back in the late 1940's and has stuck with it, that has produced institutions within Latin America capable of doing agricultural research meant for that particular locale, and the systems to get the results out to the farmers. And, of course, India is a remarkable success in that area, once they decided to commit themselves to increasing agricultural production.

Successes really are hard to find in Africa, as you know better than I do. Agricultural research has been underfunded. Governments have not been willing to commit themselves to it. There has been, over the course of time, the same phenomenon that Ambassador Galbraith referred to, that is the belief that what works in the United States is going to work in Africa. Too much emphasis on bringing people in from the outside where the emphasis should be on training Africans to do their own research, and not enough emphasis on the quite concrete measures which can help Africans with the situations they face on a day-to-day basis.

That is not all of the problem. Part of the problem is that there has not been government extension. There has not been a government willingness and/or ability to bring the necessary inputs out to the farmers. One of the problems—at least in Sahelian Africa—is it is not logistically easy. The population density is so thin that it is often hard to get fertilizer and seeds out to farmers on time for their crop, and farmers know that so they don't adapt, they don't use them, because next year around the necessary input may not be there. So there are a host of problems here.

But I do believe that one of the strengths of the United States, traditionally, is in drawing upon our own research capability to work with Africans to set up their own systems. I would argue,

however, that we now know enough that it should be very much focused on the small farmer, on learning what he does, or she does; adapting what they do and improving it, rather than trying to bring wholesale techniques from outside, or even, by the way, from Asia, which may be quite inapplicable to Africa's circumstances in the future.

Chairman LELAND. Is there anything that we can do to stimulate some interest among those African nations to do just that, to develop institutions, support them, as well as promote opportunities for Africans to invest their skills in improving African agriculture.

Mr. SEWELL. I would argue, too, clearly, the best vehicle is the USAID program at the moment. And AID has a great deal of strength in this area, historically over a period of time. I know that Peter McPherson, the Administrator of AID, is committed to this. We have been able to, over the last 5 years, do this all out of an expanding pie. The 150 account within the Federal budget has gone up 50 to 60 percent in the last 5 or 6 fiscal years. As long as the pie expands, it is easy to meet everybody's demands. Where are we going to cut when we cut now?

I have been uncomfortable feeling cuts are likely to be in long-term development aid, these kinds of institution building programs for Africa. And we ought to look at that very closely, as well as looking at ways to make our existing AID programs more efficient.

I would argue, however, Congressman, that there is a real role for the U.S. private sector here to play—nonprofit, private sector. Where are our foundations? Some, like Kellogg, Ford, Rockefeller, and others, have a really remarkable record of supporting this kind of activity over the years. But there is a lot of private philanthropic wealth in this country that should be applied to this problem.

So, too, should there be industrial help here. U.S. firms tend to train people very well. They train their own people. They usually have an efficient way of doing this. Can they be encouraged on a pro bono basis to turn that kind of training ability to training Africans to run their own systems?

So I think that out of the private sector there is a lot yet that can be done. It is not the profitmaking private sector. I do not see commercial opportunities expanding very greatly in the short run. There are exceptions to that, but they are not very great.

We shouldn't kid ourselves that sufficient incentive exists today for profitmaking enterprises to invest heavily in Africa.

Chairman LELAND. Do we develop regional concepts or do we encourage, rather, regional concepts where we don't have the necessary resources in any given country? Is that achievable?

Mr. SEWELL. I think it is achievable. It is difficult. I think there are various levels here. For some areas regional institutions are terribly important. This is true on a linguistic basis. I mean, clearly you can train Francophone, or Anglophone, or Portuguese-speaking people on a regional basis in a more cost effective way.

However, at one point you have got to get down to the small farmer. And, clearly, agricultural techniques that are adaptable to the coastal zone in the Ivory Coast are not going to be very applicable to an area in the northeastern part of Mali. There has got to be quite specific research on those kinds of areas. So what you look for is a mix of those areas. There is, by the way, I would guess—

and I am not an agricultural scientist—an applicability between the same kinds of areas across the Sahel, and, therefore, there is a complimentarity. I would think that there is a mix of regional and local institutions that need to be built.

One worries—one has to look at this very carefully, that the history of regional cooperation in Africa has not been very hopeful. There is a fair amount now going on in southern Africa under SADDC, but overwhelmed, of course, by the problems with the Republic of South Africa. The east Africa community has virtually disappeared. The west African efforts of economic cooperation have been very difficult. But that doesn't mean that one doesn't have to keep looking for new opportunities and ways of pushing on this, particularly in the agricultural area.

Chairman LELAND. Should this be an initiative sponsored by OAU?

Mr. SEWELL. I would look for a variety of sponsors—both OAU and ECA. And OAU really, frankly, has only turned to economic issues recently. The ECA is a longstanding and very competent organization led by a very competent person.

I would put a strong emphasis on the African Development Bank. It is less powerful than its other regional counterparts—the Inter-American Development Bank and the Asian Development Bank. It certainly needs strengthening. It is an African institution. It has a very good new president.

But there are a host of regional efforts going on, and each one needs to be identified for its areas of particular speciality.

This is the kind of thing the United States should be investing in over the long run. Now, that gets you into the very difficult areas of trading off on budgetary expenditures. But if we don't invest now, and aren't willing to stick it out for the long run, we will be paying the costs for a considerable period of time.

I must say, to the credit of Americans, we respond. It was once said that in the 1980's we watched famine on the television and then turned it off—well, we don't. We go to considerable lengths to deal with those emergency situations very admirably. More money was contributed privately by Americans in the last year and a half than has ever been contributed before.

But the long-term cost of African development is high. Plus, I believe Americans would really respond to a concept which would lead them to believe that we can support Africans in dealing with their own problems.

Chairman LELAND. Thank you very much.

Mr. Fazio, do you have any other questions?

Mr. FAZIO. I have no further questions. Thank you very much.

Mr. SEWELL. Thank you.

Chairman LELAND. Thank you very, very much.

Now I would like to introduce Leonard Robinson, president of the African Development Foundation. The African Development Foundation, based in Washington, recently completed its first year of funding projects in Africa. Operating in 14 African countries, the African Development Foundation has completed funding for 65 projects initiated by grassroots organizations, projects funded by ADF or intended to increase food self-sufficiency and improve the living conditions of the poor.

Mr. Robinson, welcome, and thank you for your attendance here today.

STATEMENT OF LEONARD H. ROBINSON, JR., PRESIDENT, AFRICAN DEVELOPMENT FOUNDATION

Mr. ROBINSON. Thank you very much, Mr. Chairman. If I can just correct you very quickly. We just completed our second year, so the track record is a little bit longer than 1 year.

Chairman LELAND. I stand corrected.

Mr. ROBINSON. Thank you.

You have heard a great deal of testimony this morning so I will not be redundant and repeat the obvious.

Let me indicate at the outset that I am very honored to appear before you this morning, you and your distinguished committee, to talk about the African Development Foundation and its program of assistance to small farmers throughout Africa.

Let me digress for a minute from my prepared abbreviated text and say that I am optimistic about Africa and its future with respect to being able to feed itself. I had the pleasure of serving in India back in the 1960's, at the time that Ambassador Galbraith was our Ambassador to India, as a Peace Corps volunteer and also as a Peace Corps director.

There were many times during my 5 years in India when I despaired, despite my natural tendency toward optimism, I despaired because of the enormity of the problem in India at that time. I, too, thought that India was a basket case. And if a reporter had interviewed me as I left Parlam International Airport in 1970, and asked me the question, "Mr. Robinson, do you think that 10 years from now India will be self-sufficient in food?" I would have said, without reservation or hesitation, "No." Such is not the case today. India does feed itself.

I think that Africa can do so as well. Africa is only 25 years old. That is not a long time for new emerging nations. I think if we as a nation, along with other Western nations and donors, can make a long-term commitment to Africa's development and exercise some degree of active patience, then in the long run, Africa will indeed be able to feed itsef.

Let me give you a case study, a specific, practical example of what the Foundation is doing in Africa, to try and take our limited development assistance resources directly to grassroots people and organizations.

As you know, Mr. Chairman, ADF has, for the past 2 years, provided assistance to grassroots organizations and individuals in the private sector throughout Africa. Our congressional mandate stipulates that we respond directly to the people, thus, eliminating many of the bureaucratic bottlenecks usually encountered in the traditional bilateral approach to development.

As a consequence of this direct response to the people, ADF has been able to shorten the processing time from the receipt of a complete proposal to the actual delivery of funds to an average of about 6 months. Now, that is very important when you are working at the grassroots level, which, in my opinion, has been neglect-

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ed and is clearly resource starved in terms of our traditional donor network, be it the United States or other developed nations.

Time is often the most critical factor for the survival of an idea or to capitalize on a target of opportunity, a specific project, or even a farming community in terms of its ability to feed itself.

Farming Systems Kenya Limited received a grant in 1985 from the Foundation of approximately $59,000. FSK is a nonprofit, private sector organization, run by a dynamic young Kenyan who was trained at California Poly-Tech, who returned to Kenya to manage this fledgling operation. His basic belief is that farming is a business as well as a way of providing self-sufficiency in local food production.

The purpose of the project is to increase farmers' production to the point that they can become not only self-sufficient within their families, but commercially creditworthy by growing enough to sell on the local market.

From a large pool of applicants, Paul Maina, the manager of this project, and his team of agriculturalists, select both men and women, and train them in appropriate modern farm techniques—appropriate for the circumstances in and around the area of Nakuru. From this group some are chosen for more intensive training in crop and livestock production techniques as well as in recordkeeping.

The best of these trainees become eligible for seasonal credit of $100 for land preparation, seeds, fertilizers, and pesticides. They are also eligible to receive a 3-year-old heifer to raise on a trial basis.

The FSK specialists provide technical assistance to the farmers, for example, in soil testing and seed selection. They assist with marketing, planning, and making sure that inputs are received when needed.

To help cover recurrent costs, FSK requires farmers to pay an annual interest rate of 14 percent on their seasonal credit. If the farmer successfully cares for the heifer, he gets to keep it, but must pay 25 percent of its value as a yearling. Subsequently, he or she must also turn over the heifer's first offspring to FSK, which then passes it on to another farmer.

Although Farming Systems Kenya Limited has existed since 1981 only, the ADF grant enabled it to really get started. In 1985, FSK started working with only 91 farmers. In 1986, this will increase to 187 farmers.

The response thus far has been excellent. This innovative program is helping farmers to make money, but just as important, to increase food production at the village level. It must be attractive, for FSK has more applicants than it can accommodate. What ADF is most interested in is whether or not the project can become self-sufficient—self-sufficient from additional donor input after ADF's assistance terminates. It is too soon to tell, but we think the prospects look very encouraging.

In closing, let me quote from a recent book by Brian Walker, former director general of Oxfam, England, who said:

> There lies within the African people not only immense patience but a buoyancy and generosity of spirit that is worthy of emulation around the world. Perhaps because of their capacity to work with nature, to live within the interstices of a vola-

tile climate, to harmonize community living with the demanding conditions of their environment, and to laugh in the face of adversity. Africans are survivors first and foremost.

Those human qualities, lying deep within the African character, forged out of thousands of years of experience, provide a stable and immensely powerful foundation on which to rebuild Africa. Africa's hope lies essentially with the African people. The rural poor are an asset, not a liability. With modest support from the outside, they have the capacity to rebuild their great continent.

Congress established the African Development Foundation on the premise that Africans do have the capacity to help themselves. ADF staff and I, based on our experience thus far, know this to be true.

I would say finally that I would make several recommendations to your committee as to how we as a nation can help to facilitate Africa's development. I already indicated at the outset that I think a long-term commitment—20 to 30 years—is essential.

Second, we must encourage—in fact, we must initiate—through our donor programs, the participation, the meaningful participation, of Africans in design, implementation, and management of their own projects.

We must continue efforts to encourage at the macro level policy reforms. There must be serious donor coordination. There is a tremendous amount of rhetoric about donor coordination, but very little action. Finally, greater African involvement, again at the policymaking level, in terms of our bilateral donor planning.

Thank you. I would be very pleased to answer any questions you may have, Mr. Chairman.

[The prepared statement of Mr. Robinson appears at the conclusion of the hearing, see p. 103.]

Chairman LELAND. Thank you very much.

Based on ADF's experience in Africa, what are the most critical needs in Africa today in order to increase local food production and, thus, food security and food self-sufficiency?

Mr. ROBINSON. Mr. Chairman, based on the experience of the African Development Foundation, in particular the huge volume of proposals that we receive every day from all over Africa, I would say at the grassroots level, the following resources are required: The production inputs—seeds, fertilizers, pesticides; storage capacity, storage facilities. So often, most of the produce on farms never gets from the farm gate to the market because the infrastructure—the storage infrastructure; the roads to get the produce from the farm gate to the market are simply not there. Water facilities; irrigation canals; wells; the tools that the farmers need in order to increase their food production, not only for local consumption, but to sell on the local market, are not there in reliable, consistent quantities.

Chairman LELAND. The last witness suggested that we need to develop institutions in Africa, or at least help them develop institutions within African countries in order that they themselves, as you have advocated, can do research and determine exactly what their problems are, and evolve solutions—African solutions to African problems.

What kind of expansion can you give us on that issue? Can you expound on that?

Mr. ROBINSON. I would agree with Mr. Sewell, that is to strengthen African capability and capacity; to initiate African capability and capacity where feasible should be done. In fact, this is one of the reasons why I think Congress established the African Development Foundation. There are some unique features with respect to the Foundation that facilitate this process. And one of them is we do rely upon African institutions—be they research institutions or technical assistance entities—to provide necessary technical assistance to the various projects that we fund, not only with respect to the grassroots people but to the urban disadvantaged.

I think it is exceedingly important to help give Africans the sense of trust and confidence in themselves. They do have the capacity to help themselves, but all too often, we have brought in experts from the West. Most of our bilateral aid programs are associated with a heavy commitment to technicians and to experts who are from America, or who are from other Western nations.

The capability is within Africa. There may need to be an increase in their training to bring up their skills to a certain level—in-service training programs in a whole host of areas such as management, recordkeeping, accounting, et cetera. Technical areas such as engineering; water management systems.

But I wholeheartedly concur in the necessity to utilize African institutions which exist, but which are undercapitalized, and which are overlooked quite often with respect to providing required resources and requisite expertise to their own people.

Chairman LELAND. We have budget problems in this country. We provide millions of dollars of assistance but not nearly enough to meet the kinds of needs that Africa has—or at least even proportionately, I think—that we have a problem in trying to meet our needs on a yearly basis.

Where would you place priorities? On helping to develop the institutions that we are talking about; to enhance them on production development, or the evolution of that production development?

What about credit assistance? Can you just touch on that? Or is the response to all of the above in terms of what we can do to help Africa?

Mr. ROBINSON. I realize, Mr. Chairman, that we do have to make hard decisions about how our limited resources are allocated. In the case of the Foundation, those decisions are even tougher because we are, in my opinion, terribly undercapitalized to deal with the problems of Africa.

I would say that one of the reasons why India was able to get off the ground in the 1970's and into the 1980's was because a great deal of attention was paid to developing local research institutions, the agricultural extension network and the infrastructure.

This has not happened in Africa. And until that happens, I don't think that food self-sufficiency can occur. So I would say, first and foremost, we do need to allocate concentratively resources into African agricultural research institutions, social science research institutions, and to help build the infrastructure support system to facilitate increased food production.

Credit facilities are very important. I think the private sector in Africa has been largely held back today—government has tried to do everything, and the results of this are clear and obvious. The

small farmer has no collateral, has no reputation, cannot get credit.

The African Development Foundation in fiscal year 1987 will try to begin very aggressively to provide, through our loan authority, credit to small farmers and to other small private sector entrepreneurs. So I would support both of those.

Chairman LELAND. Very good.

The gentleman from California.

Mr. FAZIO. Thank you, Mr. Chairman.

Mr. Robinson, I suppose we can look back in retrospect and show that we have learned from some of the mistakes that we have made in our development assistance efforts. We can determine whether or not a given technology was appropriate to a given sector or village. But have we the ability, really, to learn from our mistakes, or are we somehow destined to continue to repeat them?

I am wondering if you could help us by telling us what it is that ADF does in determining whether or not it is appropriate to fund a given kind of project. Maybe you could give us some criteria or indicators that we could extrapolate from on a broader scale so that we don't have as many dead ends that we seem to have encountered in this area.

Mr. ROBINSON. First of all, Congressman, I think that Congress should commend itself for building into the mandate of the Foundation a great deal of flexibility for us to learn while doing.

We are at risk in the types of projects we fund because of the lack of education and sophistication, and skills at the village level. But we do have the flexibility to try risky, innovative projects, and to learn from that experience.

Fortunately, we have on the staff of the Foundation people who have lived and worked in Africa with respect to development. I think one of the first things an institution or donor organization should do is hire people who know and understand the environment they are working in so you can avoid reinventing the wheel. There has been a tendency in our aid programs, I think, to look for panaceas, to look for magic bullets. We have careened from capital intensive projects back in the 1960's to the private sector, to taking aid to the poorest of the poor.

I don't believe in panaceas. I think all of the activities—aid activities—in the past have taught us a lot. I hear Congress today—I hear you and other members of this distinguished committee talking about the need to fund small-scale farmers. I think this is commendable and also represents an evolution in our thinking.

I also believe it is imperative to stimulate the participation of Africans at the local level in designing projects which are intended to improve their living standards and conditions. If there is a sense of ownership on the part of the farmer, or the farmer's cooperative or association, then we have found through experience that they will ensure that the project succeeds, or that the project registers some progress.

But if the project is imposed on them from the outside, then it is not theirs. Then there is no sense of ownership—they have nothing at stake.

I just recently returned from the Sahel—Niger and Mali, which in many respects is turning into powder. The consistency of the

topsoil reminds me of talcum powder—the conditions are that dire. But it is very heartwarming to go into a village on the edge of the Sahara Desert where ADF assistance has been provided to a number of small villages, to see people working in that hot Sun, with resources which have been provided directly to them for the first time—and to watch them turn this semiarid and arid land into vegetable gardens so that they can feed their own people; so much so that people who left the village years ago are beginning to come back because they heard the village is beginning to be revitalized to a very great extent.

We have instituted within the Foundation, from almost its inception, an Office of Research and Evaluation. I am one who believes very strongly in evaluation as a management tool, not as a punitive measure. If we can learn while projects are ongoing as opposed to after a project has terminated, then we can make midcourse corrections; we can assist local organizations we are funding in making midcourse corrections. We can capitalize on what is happening correctly and try to replicate that in other parts of Africa, or within another region within the country where we are providing assistance.

We just recently conducted our first assessment of roughly a dozen projects, by our director of research and evaluation, and we are encouraged by what he was able to glean from this assessment.

We have already begun to take some of those lessons learned, some of that data, to do things differently. We are in the process of conducting a country assessment profile in a number of countries, such as Senegal and Cameroon, to determine where the gaps are with respect to ongoing development assistance. Where can the Foundation fit in and provide assistance where no assistance has been provided in the past?

So we are beginning to learn while doing. And I think we are incorporating many of those lessons back into our daily operations.

Mr. FAZIO. Help me if you would to reconcile some of the things that I thought I heard you saying to the chairman in answering his question and what I think I just heard you say. You indicated to Mr. Leland you think we need to put some emphasis as we look to the basic question of how do we help in Africa, in the infrastructure. And yet, I think the committee, as you have indicated, is increasingly enamored with projects that are at a human scale, that start at the really basic level of society.

How do we reconcile that?

I think we have been guilty in the past of coming in for large-scale infrastructure projects that seem to have a magic bullet attached to them.

Is the link here what you were emphasizing in terms of participation of the people involved—is it really up to them to tell us what sort of infrastructure then makes sense?

I guess we are all very familiar with the Norwegian fish freezing plant which is now not playing that role.

How do we get from this personal level, human scale development concept that I think we are increasingly enamored with, to the answer that you gave Mr. Leland earlier about the needs still for our funds to come in on a broader scale basis and be of assist-

ance to a broader brush of society in an underdeveloped or developing country?

Mr. ROBINSON. I think it can be done very easily, Congressman. I am not convinced that we ask recipient countries what they want. I know in India in the 1960's we did not ask them what they wanted.

My own experience in India in the 1960's left an indelible impression on me. I recall one day rounding a corner, as a volunteer in a jeep, and I saw an open field with about 25 Caterpillar earth movers; all had rusted out. But I could tell from the fading out handshake, the USAID logo, that we were responsible for that particular development fiasco.

To a very great extent, aid from our side—and this is not a criticism of AID per se; I think this is an indication of where we were in terms of our attitude in the 1960's—was very heavily one sided. We basically dictated what we wanted to happen in India in the 1960's.

When that happens, I think that we don't get the biggest bang for our buck. I think most developing countries, if you are handing them a big check, won't say no; they will take it. But the bottom line is that more often than not, you do not get, or we do not get in results what we thought we were paying for.

So I think a fundamental shift in attitude or in focus, is necessary. I believe what the Foundation, the private voluntary organization community, and other nonprofit organizations are doing at the microlevel, can be complemented by what happens at the macrolevel. We don't have billions of dollars in our organizations. But what we do at the village level does depend to a very great extent on what happens at the macrolevel, particularly with respect to policies, economic policies, farm pricing policies. If the farmers in Africa move from self-sufficiency to producing enough to sell on the local market to perhaps commercial production, it is not going to be any good to encourage them to move in this direction of expansion if they cannot get their produce from the farm gate to the market. It is going to rot. There is no question about it, thus they are going to waste their money.

So there is a necessary synergy that must take place between the microlevel and the macrolevel, and AID and other bilateral and multilateral agencies can do that. But I think there needs to be a greater dialog, a more meaningful dialog, between our bilateral AID experts and host country policymakers.

Mr. FAZIO. You seem to be emphasizing time perspective—an unhurried approach that lets things evolve. Do you have any optimism as an optimist self-described that we are about to see that kind of approach implemented in our development policies in this country? Are we there yet or do we still have a long way to go in terms of educating the people who we count on to deliver most of the assistance that is provided in the foreign aid bill?

Mr. ROBINSON. You can certainly count on me and my staff as one of the U.S. Government's instruments to continue to push this line. I certainly see within AID today not only a lot of talk about what they can do to not only support and encourage small-scale projects but to include more policymakers and host country govern-

ment policymakers in the actual planning of bilateral aid programs.

I do believe that we are beginning to move in this direction. There is no question about that.

Mr. FAZIO. Just wrapping up, I would like to give you an opportunity to do two things: One, indicate what your current funding is, and what it was, and what you hope it will be. I mean, after all, you just provided us with an excellent commercial, we might as well put a little meat on the bone.

Chairman LELAND. Before you respond, if the gentleman will yield.

Mr. FAZIO. I will be happy to yield to the chairman.

Chairman LELAND. Please know that the gentleman from California is also on the Appropriations Committee.

Mr. FAZIO. That is not an idle question, I guess.

Mr. ROBINSON. Very good. We are currently, Mr. Congressman, prior to the Gramm-Rudman reduction, we were at $6.5 million—no, about $6.1 million. For fiscal year 1986 we sustained a cut of about 4.3 percent, so we are under $6 million for fiscal year 1986.

In fiscal year 1985, the appropriation was roughly $4.5 million but that represented an accumulation of appropriations from the time the Foundation was established by Congress in 1980. As you well know, we were not operationalized until February of 1984.

The President's request for fiscal year 1987 is $6.5 million.

We have received in the past 2 years thousands of proposals from all over Africa—some of a sophisticated variety, some written on the back of brown paper bags. We are only operating in 14 countries. We have funded approximately 70 projects with an average of about $62,000 per project. Obviously, that is not a great impact but we have devised a strategy, given our limited resources, which we think can yield some positive results in a limited number of countries.

We have a 5-year plan, which was promulgated last year. If that 5-year plan were to be followed by Congress for fiscal year 1987 we would be at about $13.4 million. And by the end of 1990, we would be at about $29 million.

Mr. FAZIO. So you are missing your target by over half?

Mr. ROBINSON. That is right.

Mr. FAZIO. The 5-year plan, does that begin to assess the demand that those applications indicate?

Do you think the assessment of your marketplace, so to speak, is even greater than your 5-year plan would encompass?

Mr. ROBINSON. It probably does, but we did want to be prudent in the beginning years of the Foundation.

Mr. FAZIO. I think we have probably learned that prudency is not only good policy in Africa but mandatory fiscal policy in this country.

Mr. ROBINSON. Absolutely, absolutely.

Mr. FAZIO. Would you, just in conclusion, want to cite any other entities in the entire aid area that you would think are moving in the direction, perhaps in other regions of the world, or in other areas—durban versus rural, for example—that you think are dealing in the same terms you are?

Mr. ROBINSON. I think that the Peace Corps Africa food initiative is a significant step in the right direction. I think the Peace Corps will face markedly different circumstances in trying to help Africa increase its food production than the contribution the Peace Corps made in India in the 1960's and 1970's, but I would single out the Peace Corps first of all.

Mr. FAZIO. Thank you, Mr. Chairman.

Chairman LELAND. Mr. Robinson, let me just ask you a question that is somewhat—well, it is not unrelated at all, because there are some real difficulties in our involvement as a nation in Africa due to political differences that we hold in some countries of Africa.

Can you just comment on the politics of Africa and how you feel that this government should approach the kind of aid that we would like to render but where we run into roadblocks because of ideological differences? Just, for instance, Ethiopia is in dire straits even today. And Ethiopia has a different ideological foundation than this country, and because of that it causes great consternation on the part of government officials who are involved in helping to solve the problems that they are afflicted with.

You understand the gist of our question. Please, if you will, comment as best you can.

Mr. ROBINSON. You have asked a very complex and difficult question, Mr. Chairman, but let me offer my personal opinion about this.

From my perspective, I see the United States, particularly the Congress, beginning to evolve—beginning, meaning very perceptive by—to evolve a more mature and rational perspective on Africa.

I do believe that in the past 6 or 7 years our aid to Africa has increased. It is not on the same scale as Latin America or Asia, for that matter. I think we have to put America's involvement in Africa in a historical context. Outside of the slave trade, outside of our special relationship with Liberia, and perhaps to a lesser extent with Sierra Leone, this country did not have a colonial history with Africa.

Most Americans, until the drought and famine of last year, did not even know much about Africa outside of South Africa and Kenya, and I think we ought to be honest about this. Unfortunately, it took the drought and famine in Ethiopia, the Sudan, and 25 or 26 other countries to really bring Africa to our television screens and to the front pages of the newspapers.

What disturbs me is that Americans tend to have a very short attention span, and now Africa has faded to the back pages of The Washington Post and the L.A. Times, et cetera. What is required—is to sustain interest in the challenge. There was a tremendous outpouring of humanitarian assistance, not only from this Government, but from the American people, but now that the crisis is over, what can we do as a nation over a long, sustained period of time to assist Africa.

The economic policy initiative for Africa implemented by Congress last year, although insignificant in terms of the dollars, is an important step forward. We are talking about a half a billion dollars for all of Africa—through the EPI—whereas, the Kissinger commission recommended $8.5 billion for Latin America. But, nonetheless, it is today a reality. It is a step in the right direction.

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And, again, it is indicative, I believe, of the growing maturity, the evolving maturity and interest of Congress in Africa.

I also believe that Africa is in our best interest. We have been lucky up until now that the overflow of African refugees across borders, because of political upheaval, droughts, and famine, has only affected their neighbors and to a lesser extent, the European nations.

If Africa reaches a point where this natural escape valve is no longer available because the country next door is experiencing its own problems—and we certainly began to see signs of this in the late 1970's with respect to Somalia. And how many times have the Nigerians expelled Ghanaians?

If this continues to happen, the spillover will likely flow into Europe and subsequently, in my opinion, to the United States. We already have a problem with our neighbors south of the border; an influx of African refugees into the United States will only compound that problem. I am looking at this from a very practical perspective.

I, therefore, hope that the trend I sense in the U.S. Congress, in this Government, to try to do more for Africa continues, even though historically and traditionally it really falls into the camps of the French, the British, and the Germans.

If we can, for example, initiate a Marshall-type plan for Africa, whereby we begin to commit ourselves in conjunction with our Western allies, to a serious, modicum of resources for Africa that are appropriate for where Africa is at this point in time in its development, perhaps not for every country, but those countries that have the political will; where economic policy reforms are already in place; and where there is some evidence of divesture of parastatals, then I think that we would be doing a great thing.

Chairman LELAND. Thank you very, very much. We consider your testimony to be an invaluable contribution to our hearings. Thank you so much.

Mr. ROBINSON. Thank you.

Chairman LELAND. Our next witness is Dr. Phyllis Windle, Office of Technology Assessment.

At the request of the Select Committee on Hunger, OTA is currently in the process of assessing Low-Resource Agriculture in Developing Countries and its Implications for Africa.

Dr. Windle will update the committee on OTA's progress thus far on this study.

Thank you for your patience, Dr. Windle, and thank you very much for coming to us today. We really appreciate this opportunity.

STATEMENT OF PHYLLIS N. WINDLE, PROJECT DIRECTOR, OFFICE OF TECHNOLOGY ASSESSMENT, U.S. CONGRESS

Ms. WINDLE. Thank you, Mr. Chairman. It is a pleasure to be here.

OTA's work on Africa began almost 2 years ago at the request of your committee when we began our work that resulted in the publication Africa Tomorrow. So it is a personal pleasure to be here to report on both of those.

Our current work began at the request of your committee, several others, as well as several members of OTA's Technology Assessment Board, including Mr. Evans, who is also a member of your committee.

We expect that we will be releasing a special report on development in the Sahel early this summer. In addition, we are researching a wide range of topics for the full assessment that we will be releasing in the summer of 1987.

The focus of all of our work is on assistance to the poor rural farmers and herders throughout Africa. These are people who have very little access to technology of any kind or to resources of any kind. Therefore, we are calling this low-resource agriculture.

Our question has been: What are the implications of this for technology? We started by saying we first must understand the current farming and herding systems that are used in Africa. These, in many cases, are the same descriptors that Mr. Gilman used in the language of his bill in that agricultural systems throughout much of sub-Saharan Africa are low-risk and diversified. For example, people may grow sorghum, millet, and maize in the same field as a way to adapt to drought and to hope that there is at least some small crop in a year that could be very bad for any one of those three. In addition, they may have goats, chickens, livestock of other sorts to diversify their operation.

Most of the farming systems are also very low cost in that fertilizers are not usually commercial fertilizers, they may be ashes, they may be animal manure of various kinds, or they may be household wastes.

The systems are ones that are very dependent upon local resources and local knowledge. The farmers and herders that use them are experts in the resources around them. We saw during the most recent drought in the Sahel that people relied on gathered food that they had not used in better times to supplement the crops that they grew themselves.

We also know from development experiments with fuel wood that especially the women, who often gather the fuel in African families, are very knowledgeable about the drying characteristics of different shrubs and trees, about how well they burn, how many sparks different species of plants give off. This is the kind of information that makes it into African agriculture.

There is also a very new realization, I think, that African agricultural systems are dynamic and experimental. Often we have regarded farmers as tradition-bound. This is not the case. There is a long history throughout much of Africa of farmers doing their own cattle breeding, doing their own plant selection from proved varieties. Often this was going on right under the nose of Western-trained scientists and no one even noticed.

I would like to note that the characteristics of African agriculture that I have just described are ones that are very different from most American agriculture, as we have heard earlier this morning. But I would note, and this is a point I will return to later, that American farmers and ranchers may have interests in common with their African counterparts.

I think we have to recognize that farmers and herders in Africa lead lives of drudgery, sickness, and poverty, therefore, low-resource agriculture is very definitely a problem.

I think that we also can recognize, though, that low-resource agricultural systems have great strengths: the technologies are suitable for local conditions of labor, environment, and the economy. Therefore, they really are the technologies that are appropriate now. I think that our task as donors and researchers is to find ways to help African farmers and herders know what is available elsewhere, find ways to complement the technologies that they already have, and enable them to make other choices to improve their lives in ways that are complementary rather than changing technologies wholesale.

Therefore, the remaining work that OTA will be doing over the next year will to be looking for these types of technologies where we are building upon the strengths of current systems in ways that have not been done in the past.

I will use a very brief example here. There is a farming method that at least two of the international agricultural research centers are investigating now called alley farming, which is a modification of the traditional farming system that has been used in many parts of Africa called bush fallow where crops are grown for a period of time, then the land lies fallow for perhaps 6 or 10 years, to be vegetated with woody plants, trees or shrubs. Then those are harvested and eventually the land returns to cropping.

This has been a system that has been well adapted to African conditions in the past. Now, as populations are increasing, there is greater pressure on the land and the fallow period is often being shortened in these systems, therefore, water conservation, and soil conservation, are both dropping.

Therefore, the International Livestock Centre for Africa and the International Institute for Tropical Agriculture, both with field stations in Nigeria, have developed a system whereby crops are grown in alleys between hedgerows of woody plants. They are maintaining the multiple products that were so important in the traditional system. They are maintaining the water conservation aspects of the way it was done, but it is a more intensive land use. So the farmers that will adopt it will be saving money on it, and they are also countering some of the detrimental aspects of the bush fallow system as it is practiced under increasing population pressure.

I want to say at this point that we don't expect to find undiscovered miracle technologies and that alley farming is no more a solution for all of Africa than any other technology that we perhaps turned to with great enthusiasm in the past. Therefore, OTA is more interested in identifying general lessons that we have learned from our past failures and from our growing list of successes in development assistance, that we now can learn from and that we can apply in new cases.

Here I will turn to the analysis that we are completing now on development in the Sahel and the United States-Sahel Development Program. Our analysis there shows that we were probably overly optimistic about the speed with which development could occur. Partly this was because our assumptions in the early days of

that program about technology being available, especially for arid and semi-arid regions of Africa were simply wrong.

We know now that technology must be adapted to the special needs of farmers and herders in Africa, that average kinds of technologies for average situations don't work; they are below average.

We also know that sustainable development, therefore, requires a very thorough knowledge of local environmental conditions, whether it be climate, soils, pests, crops, or a whole range of other things. We have learned also, perhaps surprisingly, that farmers and herders evaluate technologies on a much broader basis than researchers and development assistance professionals often do, that they have a broad set of goals for supporting their families, and that when technologies are suggested for adoption that don't fit their goals, they won't adopt them.

I think we can conclude, then, by saying that the best way to know the goals of farmers and herders, and to know what they need, is simply to ask them. There is a growing interest now, I think, in including farmer and herder input in all stages of project development, design, and implementation.

As we have been looking for both the specifics and the general reasons why development assistance has succeeded and has failed, we have considered a number of factors beyond the technological ones. I think we have come to the conclusion that in many cases the institutional considerations are just as important as the technological ones. This is as true for institutions such as U.S. development assistance organizations as it is for African institutions. And I must say, it is also as true for the U.S. Congress as it is for the Agency for International Development.

I would say that we have identified three areas of general concern that I think are going to be on the congressional agenda in the future. One is the continuing question of what is our intent in development assistance and foreign assistance. The kind of debate we have had this morning about policy goals—Is it to support U.S. agriculture? Is it to support military or security interests? Is it to support development?—are questions that can only be answered by policymakers such as yourself, but they have implications for the effectiveness of our development assistance.

I think another general area that we will see debated much more so is the continuing suitability of the basic human needs legislation. For the first time, we are hearing discussions about whether that legislation still fits the needs of our development assistance and foreign assistance, and whether in a de facto way, without any legislative change, we are making major foreign policy changes in the executive branch.

I would also highlight an area that has been a particular concern for us as we have looked at development assistance in the Sahel. The working relationship between AID and the Congress has often been problematic, and the problems come from both sides. But this is an area that may be fruitful for further investigation and for examining as a way to spend our money more efficiently in times when we are unlikely to have more money to spend.

It is not my role to be making policy decisions like those, for which I am eternally grateful. But one thing that I can do for you is to provide a slightly different perspective on some of the issues

that you consider. Therefore, I want to return to the question you have asked repeatedly this morning about U.S. agriculture and agriculture in the Third World. I will take a very long-term perspective.

I would say that U.S. agriculture has benefited substantially from African agriculture already. If American agriculture relied only upon crops that were native to the United States, we would be growing cranberries, sunflowers, and pecans.

Now, Mr. Daschle may approve of that since sunflowers are grown largely in the Dakotas, but I think we would be surprised that we would lose many others of our major crops. In fact, Africa is the origin of sorghum and honeybees, and certainly we have benefited from germplasm that has come from that part of the world for those organisms.

There are also agricultural scientists and historians who would say that the entire Louisiana rice industry is based upon technical knowledge that came from slaves that were imported to the United States from west Africa. Now, clearly, there are ways of transferring technology that are ethically abomidable as well as ways that are sound. But we can say that we have benefited substantially already.

When we consider agricultural protectionism, I would like to also suggest that you look at the case of the Israelis who are recognized as having among the most innovative agriculture in the world. They have relied for a large part, recently, on exports of fruits and vegetables to Europe.

In the last few years, they have had grave questions about whether they would be able to sustain those exports to Europe with the entry of Spain into the Common Market and increasing Spanish competition. Therefore, they have turned to new kinds of agricultural products. They have also decided that selling fruit and vegetable seeds to Europe, or selling seeds to Spain, would be a more profitable way of approaching their agriculture than trying to sell the raw products themselves—that small packets of seeds are a much more efficient export than a large crate of tomatoes. The Israelis are turning a problem into an opportunity for technological innovation, an attitude we might emulate.

So with that I will conclude and be happy to answer your questions.

[The prepared statement of Ms. Windle appears at the conclusion of the hearing, see p. 116.]

Chairman LELAND. Thank you very much, Dr. Windle.

We are particularly pleased that you are here today to report to the committee on the progress of OTA's assessment of Low-Resource Agriculture for Developing Countries, which was commissioned at the request of this committee, as you had indicated.

You mention in your testimony that this assessment is expected to be completed in June 1987.

Can you tell me what recommendations you anticipate this assessment generating?

Ms. WINDLE. It is too early for me to tell you what the full assessment dealing with all of sub-Saharan Africa will suggest because we are really at the point of just gathering information for that now. We have a large number of people doing research for us

on questions such as new models of agricultural research and extension.

However, the report that we have in draft form now on the Sahel Development Program is closer to the stage at which we know clearly what we are interested in saying about policy and the effectiveness of our development assistance.

I think generally we want to say several things. One, is that U.S. development assistance is very diverse. We spend money through a large number of organizations ranging from those that provide very large grants and loans, like the World Bank, and the large AID projects, to much smaller scale projects such as those of the ADF and IFAD, and the Peace Corps.

The temptation is in a time of budget uncertainty to ask which would be the one choice, if you had to make a choice. And I, as a scientist, would go back to that famous law of science, don't put all your eggs in one basket. Especially in times of uncertainty, it is wise to be cautious about making choices, especially if those choices are not really clear.

So, I would say we have a real strength in the diversity of organizations we are supporting. I would continue to see that we will benefit from those various strengths.

This suggests that we recognize the particular roles—for example, the private voluntary organizations have—the particular roles that the Agency for International Development has, and not try to make one into the other; but that we allow each to do what it is able to do best.

Chairman LELAND. We have heard from the witnesses before us today that in order for technologies to be self-sustaining and appropriate to the needs of poor African farmers, input must be received from African farmers and herders in the planning and implementation of agricultural technologies, as you have suggested too.

How are village-based needs assessments incorporated into AID project design, and how responsive is AID to village-based needs assessment in implementing agricultural assistance projects?

Ms. WINDLE. I would say that there is an increasing awareness that this needs to be done within AID. I would also say that we have a long way to go; partly it is because of institutional constraints within the Agency. For example, the kinds of responsibilities that many AID mission people have, they would say limit the time that they can spend in the field, actually speaking with farmers and herders about what they need and want.

In part, I would agree with them. The methodology for assessing needs, for quickly asking a lot of people's advice and input, are not well known, and that it has not been an area that scientists, social scientists, agronomists, and others, have worked together to develop well. There are some methods, such as rapid rural appraisal or rapid rural reconnaisance, that have been attempted, but there has been very little systematic attention to developing those further. And that is something that academic research is probably required for.

The other thing is that there are groups that do carry out village-based needs assessments, and many of the private voluntary organizations are strong in that. I would say the Peace Corps is strong in that.

There are ways that those sorts of resources could be drawn upon, I think, more effectively, to incorporate that kind of view into AID policy.

Mr. Fazio, in response to one of your earlier questions, I think you hit the nail on the head, and this is the connecting link between the village-based projects at the small scale and the larger scale projects—that as long as the intentions are clear, what the goals are, what people want, then there will be a need for large-scale infrastructure projects that are perhaps best funded by groups such as the World Bank. But there will also be a need for other kinds of projects that are funded at a very different scale in a very different fashion.

Chairman LELAND. Thank you.

Mr. Fazio.

Mr. FAZIO. Thank you, Mr. Chairman. I happen to Chair the subcommittee that funds OTA, so I want to indicate that I think you have acquitted the operation well this morning.

Ms. WINDLE. Thank you.

Mr. FAZIO. I wondered, though, if you had had much success in penetrating the Foreign Operations Subcommittee on Appropriations, or the Foreign Affairs Committee, or the Agriculture Committee with the information that you brought to this select committee?

Ms. WINDLE. The House Agriculture Committee is one of your fellow requesters for this study, so I would have to say, yes. Their interests, I think, are more in terms of what the International Agricultural Research Centres are doing, because that is a particular area in which they have done some investigation and would like to follow. We continue to provide informal briefings for the two Africa subcommittees, too.

Mr. FAZIO. As you wrap up the report and have it printed, I hope we certainly will find the other committees of jurisdiction, particularly those that will be directing our aid program or development assistance programs getting the benefit of the work that the legislative branch has paid for, because I think it is a worthy study that ought to get some additional exposure with the people that have direct hands-on oversight and appropriation responsibility.

I wondered if you could tell us what you think of the value of the Collaborative Research Support Programs, or CRSPs, I guess they are called, that operate between the United States and overseas scientists, African scientists, perhaps, in the context of being relevant to the needs of those countries. Do you have much experience in providing the Congress with any oversight of that?

Ms. WINDLE. When I first went to OTA several years ago, I was working on a project on agricultural water use in the Western United States. As part of that we were interested in the question of whether technology that was developed overseas would have any relevance to American agriculture. In investigating that area, we looked at the bean-cowpea CRSP mainly because of the involvement of some people very well known for arid lands research—I think at Riverside, CA—who had worked together with scientists in South America as well as Africa.

Mr. FAZIO. I happen to know the people involved.

Ms. WINDLE. We found that it seemed to be a project that had benefits on all sides. I am afraid that is all I can say about it. We have not looked at the ones that are more focused in Africa.

Mr. FAZIO. If it fits in the work that is underway, you might want to take a look at that, if it does.

I think that is it, Mr. Chairman. Thank you very much.

Chairman LELAND. Thank you.

Dr. Windle, thank you very much.

Just as a matter of record, let me state, as Chair of this committee, that while we have realized the great contributions that the Congress has made to the emergency situation on the continent of Africa in the recent past, and, too; let me note the incredible contributions made by the private sector of this country to that same effort, we know that the main issue here is what it is that we are going to do for the long term.

We know that we accrue invaluable benefits by our involvement through this kind of assistance—aid to Africa for the purpose of helping to feed its people as well as helping to teach its people how to feed themselves wherever it is that we have that kind of input or we are allowed to give that kind of input is most invaluable.

We are committed, indeed, to doing all that we can to try to rally the resources necessary to make an indelible impression on the continent of Africa. And since those issues have been raised by more than one of the witnesses about the historical deficit that this country with Africa in terms of its contributions, we hope to inspire our colleagues to do a whole lot more.

Mr. Fazio and I have made side comments as the hearing has gone on with the great implications about what more we need to do. I think that people, now that we are much more intelligent about the humanity of people on the continent of Africa in this Congress, are more willing to do more. Of course, we are under severe budget constraints for a lot of different reasons, but we feel that Africa has to serve as a great priority in our foreign policy matters as well as in our foreign interests as we endeavor to do as much as we can to save humanity on the face of this Earth.

I want to thank all of the witnesses for participating. I certainly want to thank my colleagues for their perseverance through this hearing, and their invaluable contribution. Thank you very, very much.

[Whereupon, at 12:30 p.m., the committee adjourned.]

[Material submitted for inclusion in the record follows:]

PREPARED STATEMENT OF HON. TONY P. HALL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OHIO

AS CHAIRMAN OF THE INTERNATIONAL TASK FORCE, I WOULD LIKE TO BRIEFLY EXPRESS MY KEEN INTEREST IN TODAY'S HEARING ON "FAMILY FOOD PRODUCTION IN AFRICA." THE SELECT COMMITTEE ON HUNGER HAS TAKEN A LEADERSHIP ROLE IN PROVIDING INFORMATION TO THE CONGRESS ON THE EMERGENCY FOOD AND NON-FOOD NEEDS IN AFRICA. WE HAVE ALSO WORKED WITH MEMBERS OF THE AGRICULTURE AND FOREIGN AFFAIRS COMMITTEES TO PASS LEGISLATION WHICH WILL ENHANCE THE EFFECTIVENESS OF OUR OVERSEAS FOOD AID PROGRAM. THE COMMITTEE IS CONTINUING ITS FOCUS ON THE NEEDS OF POOR AFRICANS AND IN PARTICULAR THE NEEDS OF POOR FARMERS IN AFRICA TO PRODUCE ENOUGH FOOD FOR SELF-SUFFICIENCY.

I HAD THE OPPORTUNITY TO VISIT WEST AFRICA IN JANUARY AND WAS IMPRESSED BY THE EFFORTS WEST AFRICANS HAD UNDERTAKEN TO TRY AND INCREASE LOCAL FOOD PRODUCTION. HOWEVER, PER CAPITA FOOD PRODUCTION IN AFRICA REMAINS INADEQUATE AND CONGRESS MUST CONTINUE ITS EFFORTS TO PROVIDE VIABLE SOLUTIONS TO AFRICA'S FOOD PRODUCTION PROBLEMS. THIS COMMITTEE HAS A VERY IMPORTANT ROLE IN FORMULATING THE INFORMATION CONGRESS NEEDS TO ADEQUATELY ASSIST AFRICAN COUNTRIES TO ACHIEVE FOOD SECURITY AND SELF-SUFFICIENCY.

I LOOK FORWARD TO TODAY'S DISCUSSION AND I WOULD ALSO LIKE TO THANK THE WITNESSES FOR COMING TO TESTIFY ON THIS VERY IMPORTANT SUBJECT.

THANK YOU MR. CHAIRMAN.

PREPARED STATEMENT OF HON. MARGE ROUKEMA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

MR. CHAIRMAN:

TODAY, THE SELECT COMMITTEE ON HUNGER CONTINUES ITS INVESTIGATION INTO THE NEEDS OF AFRICAN AGRICULTURE. IT HAS BECOME INCREASINGLY CLEAR TO THOSE CONCERNED WITH DEVELOPMENT IN THE THIRD WORLD, THAT IN OUR ATTEMPTS TO BRING THE BENEFITS OF INDUSTRIALIZED SOCIETIES TO THE POORER COUNTRIES, WE HAVE IGNORED THE ESSENTIAL ROLE OF AGRICULTURE IN THEIR ECONOMIES AND THEIR DEVELOPMENT. AFRICA REMAINS THE ONLY CONTINENT WHERE FOOD PRODUCTION PER CAPITA HAS DECLINED OVER THE LAST TWENTY YEARS. IT IS TRUE THAT AFRICA HAS EXPERIENCED A DISASTROUS DROUGHT THE LAST SEVERAL YEARS, WHICH HAS COMPOUNDED THE FOOD PRODUCTION PROBLEMS, BUT THAT DOES NOT EXPLAIN THE LONG-TERM DECLINE. OTHER FACTORS ARE AT WORK HERE. COULD IT BE THAT NOT ENOUGH ATTENTION HAS BEEN PAID TO THE SPECIAL NEEDS OF AFRICAN AGRARIAN SOCIETY.

I HAVE OFTEN MENTIONED THE SUCCESS IN ASIA OF THE "GREEN REVOLUTION" AND HOW WE SHOULD STRIVE FOR THE SAME ACHIEVEMENT IN AFRICA. BUT THERE HAS EMERGED NO CLEAR CONSENSUS ON HOW TO BEST ADDRESS THE PRESENT NEEDS. WE KNOW WE MUST PURSUE EDUCATION, TECHNICAL RESEARCH AND AGRICULTURAL EXTENSION SERVICES. WE MUST

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DO OUR BEST TO ENCOURAGE MACRO-ECONOMIC REFORM BY MANY AFRICAN GOVERNMENTS. AND WE MUST PURSUE SPECIFIC COUNTRY PROGRAMS THAT WILL STRENGTHEN BASIC INSTITUTIONS AND INFRASTRUCTURE. THE U.S. AND OTHER NATIONS HAVE MADE EFFORTS AT SEEKING COMPREHENSIVE SOLUTIONS. WESTERN DONORS WILL CONTINUE RESEARCH IN FINDING NEW SEED STRAINS, DEVELOPING APPROPRIATE IRRIGATION TECHNIQUES AND PURSUING CHANGES IN AFRICAN AGRICULTURAL PRICING POLICIES.

OUR TASK TODAY IS TO FIND CONSENSUS ON A COMPREHENSIVE STRATEGY THAT CAN UTILIZE LIMITED RESOURCES. WE NEED A STRATEGY THAT CAN BE CARRIED OUT CONSISTENTLY OVER THE LONG TERM - BEYOND ONE ADMINISTRATION TO THE NEXT, BEYOND ONE CONGRESS TO THE NEXT, BEYOND ONE CRISIS, TO PREVENT THE NEXT !

WE HAVE ANOTHER TASK TODAY AS WELL. THE NEEDS OF THE POOREST PEOPLE, AFRICA'S RURAL FARMERS, WHO ACCOUNT FOR THE BULK OF AGRICULTURAL PRODUCTION, REMAIN UNMET. AS MANY EXPERTS ACKNOWLEDGE, THIS PEASANT SECTOR WILL REMAIN SIGNIFICANT INTO THE NEXT CENTURY. IF WE DON'T BEGIN TO DEVELOP THE POTENTIAL OF THIS VAST HUMAN RESOURCE, THEN THE HOPES FOR SELF-SUFFICIENCY IN AFRICAN AGRICULTURE WILL REMAIN GRIM. AFRICA HAS THE CAPACITY TO FEED ITSELF, AND I LOOK FORWARD TO TESTIMONY FROM OUR WITNESSES THAT WILL TELL US HOW WE CAN AID IN FULFILLING THAT CAPACITY.

PREPARED STATEMENT OF HON. JAMES H. SCHEUER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. Chairman, I am pleased to be able to include my remarks in the record of your hearing on the very important issue of "Family Food Production: Sustainable Agriculture through Appropriate Technology".

As you know, the Science and Technology's Subcommittee on Natural Resources, Agriculture Research and Environment, which I chair, held a series of hearings last fall on the long-term research needs and the prospects for sustainable development of sub-Saharan Africa. The Subcommitee examined five broad areas: drought, population, environmental degradation, and the need for appropriate technology and sustainable agricultural practices. These hearings have been summarized by the Congressional Research Service, and a report stating conclusions and recommendations will be released shortly by the Committee.

In the course of these hearings, we heard alarming statistics which demonstrated the need for immediate and long-term

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assistance for sustainable development. Africans denude and deforest large areas in the continuing search for firewood, advancing the desert at a rate estimated to range from 100,000 to 300,000 square miles a year. Each year, another 16 million people are born, exacerbating existing nutritional health, and educational problems. Each year for the last 20 years, per capita food production has declined, resulting in chronic malnutrition, if not actual starvation, for large segments of the African population. As we saw last year in the heart-breaking pictures on the evening news, drought pushed this already desperate situation past the breaking point.

Prospects for Sustainable Development

As witnesses testified on different aspects of the plight of sub-Saharan Africans, I was struck by the recurrence of several themes. The role of women in African development dominated many of our discussions. It is the women who produce most of Africa's food. African women process, market and store food, rear children, and find fuel and water. African women are engaged in an unending struggle to succor their families, a struggle made more desperate by increased fertility, deforestation, desertification, and drought. Yet these African women are often ignored by development efforts as well as by their own governments. Women are denied access to education and credit, and have no power in decision-making. In addition, women have been excluded from agricultural and technological extension

services which are ostensibly designed to aid the small farmers, and they rarely have access to family planning and health services. As we heard in witness testimony, the women of Africa are an untapped resource critical to regaining food self-sufficiency for this region.

Witnesses also testified on the role of the drought in the recent famine in sub-Saharan Africa. There is a consensus that drought was the trigger, not the cause, of famine in this region. An underlying cause was the failure of the region's ecosystem stemming from the increased demands of swelling population and misguided land-use. Traditional agricultural practices were able to conserve limited resources through long fallow periods and a nomadic lifestyle. However, recent efforts to produce more food by placing marginal land under cultivation has led to widespread environmental degradation and destruction of the delicate ecological balance. Our challenge is to break this cycle.

We must begin to reverse Africa's decline. We must provide assistance at the local level and tailor our assistance to local needs, especially the needs of women. The technology must be resource-conserving, time-saving, environmentally sound, and sustainable. Time after time, our witnesses pointed to past development efforts which, for a variety of reasons, did not take into account critical local information and, therefore, failed miserably. In view of our current fiscal constraints, we cannot continue on this wasteful and disruptive path. Yet the crisis in Africa requires continued support. Our limited resources must be targeted more carefully and effectively in the future.

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Prepared Statement of John Kenneth Galbraith, Harvard University

I come to this hearing, if I may begin on a personal note, out of an earlier training and experience in agricultural matters; I will be, I venture, one of the few appearing today who has a first university degree in the academic discipline of advanced animal husbandry. But I also speak from rather more recent experience and later observation in India and elsewhere and from quite a few years of reading and instruction in the theory and practice of economic development. I draw extensively on a paper given a year or so ago before the General Assembly of the United Nations.

For understanding the problems of agriculture in the Third World in our time we must first be strongly aware of the central error in our view of economic development in these last decades. It is, next only to our failure fully to perceive and act on the consequences of nuclear conflict, the most compelling error in social perception in our age. The mistake is in believing that the advanced industrial countries, either

SOCIALIST OR CAPITALIST IN THEIR DEVELOPED FORM, ARE A GUIDE AND MODEL FOR THE LESS ADVANCED ECONOMIC AND SOCIAL DEVELOPMENT OF THE NEW COUNTRIES OF THE WORLD. IT IS AN ERROR THAT ARISES FROM THE FAILURE OF THE OLDER INDUSTRIAL COUNTRIES TO UNDERSTAND THEIR OWN HISTORY OR TO APPRECIATE THE SOURCES AND WELLSPRINGS OF THEIR OWN DEVELOPMENT AND MODERN WELL-BEING.

ECONOMIC LIFE, WE MUST RECOGNIZE, IS, BEFORE ALL ELSE, A PROCESS. IT HAS ITS OWN DYNAMIC, ITS GIVEN IF NOT QUITE INVARIABLE SEQUENCE. FOR EACH STAGE IN ECONOMIC DEVELOPMENT THERE IS AN APPROPRIATE POLICY -- AN APPROPRIATE COURSE OF PUBLIC ACTION. THERE IS ALSO A GREATLY NEEDED AVOIDANCE OF WRONG ACTION -- AVOIDANCE OF POLICIES THAT ARE RELEVANT ONLY TO THE LATER STAGES OF THE DEVELOPMENT PROCESS.

IN ALL THE EARLIER STAGES OF ECONOMIC DEVELOPMENT THE APPROPRIATE AND EFFICIENT AND NECESSARY EMPHASIS IS ON AGRICULTURE. SO IT WAS IN EUROPE BEFORE THE INDUSTRIAL REVOLUTION, IN THE UNITED STATES AND WHAT IS NOW THE SOVIET UNION IN THE LAST CENTURY. THE REASON FOR THIS AGRICULTURAL

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EMPHASIS IS SIMPLE AND FORTHRIGHT: THE FIRST ESSENTIALS OF LIFE ARE FOOD AND TEXTILES, AND THESE AGRICULTURE PROVIDES OR PROVIDED. (THERE IS STILL, THE OCEANS APART, NO OTHER CONSIDERABLE SOURCE OF FOOD.) IN THE LAST CENTURY WHEN PUBLIC MINDS HERE IN THE UNITED STATES TURNED TO ECONOMIC DEVELOPMENT, IT WAS EXTENSIVELY TO AGRICULTURE -- TO THE BEST DESIGN FOR THE TENURE AND USE OF THE PUBLIC LANDS; TO EDUCATION, WITH PARTICULAR EMPHASIS ON RURAL SCHOOLS; TO AGRICULTURAL EXPERIMENT AND EDUCATION LEADING ON TO THE LEGISLATION THAT PRODUCED THE COUNTRY-WIDE NETWORK OF AGRICULTURAL EXPERIMENT STATIONS AND AGRICULTURAL (AND MECHANICAL) COLLEGES. AND TO A CANAL AND LATER A RAIL TRANSPORTATION SYSTEM THAT WAS [illegible] LARGELY IN THE SERVICE OF AGRICULTURE AND FOR WHICH, I MUST SADLY ADD, WE BORROWED EXTENSIVELY AND, LIKE THE LATIN AMERICAN COUNTRIES TODAY, COULD NOT OR DID NOT ALWAYS PAY. AT A LITTLE LATER TIME THERE CAME THE AGRICULTURAL EXTENSION SERVICE. THOUGHT BUT NO COMPARABLE THOUGHT WAS GIVEN TO INDUSTRIAL DEVELOPMENT. IT WAS NOT THAT INDUSTRY WAS BELIEVED

UNIMPORTANT; RATHER, AT THAT STAGE IN THE DEVELOPMENT PROCESS AGRICULTURE WAS RIGHTLY SEEN AS HAVING THE HIGHER CLAIM. THE EARLY EMPHASIS OF THE OTHER INDUSTRIAL COUNTRIES WAS DIFFERENT IN DETAIL BUT NOT IN SUBSTANCE.

THIS PART OF THEIR OWN EXPERIENCE THE OLDER INDUSTRIAL LANDS HAVE NOW LARGELY FORGOTTEN. WHEN THE QUESTION OF THE DESIGN FOR ECONOMIC DEVELOPMENT COMES UP, ALL THE DEVELOPED INDUSTRIAL COUNTRIES LOOK AT THEIR PRESENT INDUSTRY AS THEIR GUIDING EXAMPLE, NOT AT THEIR PAST CONCERN FOR AGRICULTURE, AND IT IS INDUSTRIALIZATION THAT THEY STRESS. THE GROWTH OF URBAN INDUSTRY IS THOUGHT THE TRUE TEST OF ECONOMIC DEVELOPMENT. THIS IS GREATLY AT VARIANCE WITH THE REAL REQUIREMENTS OF HISTORICAL PROCESS.

THERE HAS BEEN ANOTHER AND YET MORE IMPORTANT ERROR. MUCH OF THE ADVICE FLOWING OUT FROM THE OLDER INDUSTRIAL COUNTRIES REFLECTS THE MODERN IDEOLOGICAL ATTITUDES TOWARD ECONOMIC DEVELOPMENT. FROM THE WESTERN DEMOCRACIES COMES THE CASE FOR

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FREE ENTERPRISE, BY THE COURAGEOUS STILL CALLED CAPITALISM. ON THIS THE PRESENT ADMINISTRATION IN THE UNITED STATES IS NOT NOTABLY RESTRAINED. FROM THE SOCIALIST AND COMMUNIST WORLD COMES WORD THAT DEVELOPMENT SHOULD BE IN A SOCIALIST FRAME. PROPONENTS OF EACH SYSTEM LOOK AT WHAT THEY HAVE, REFLECT FAVORABLY ON ITS MERITS AND RECOMMEND AND SPONSOR ITS EXPORT TO THE NEW, PREDOMINANTLY AGRICULTURAL LANDS.

AGAIN THERE IS NEGLECT OF HISTORY. THE CASE FOR CAPITALISM OR SOCIALISM WAS NOT SERIOUSLY DEBATED BEFORE THE ARRIVAL OF URBAN INDUSTRY. IT WAS NOT A COMPELLING ISSUE IN EIGHTEENTH-CENTURY EUROPE OR NINETEENTH-CENTURY RUSSIA OR POST-COLONIAL AMERICA. IT WAS RECOGNIZED, INSTINCTIVELY, THAT AGRICULTURE HAS ITS OWN PARTICULAR SOCIAL AND ECONOMIC PATTERNS, PROBLEMS AND TENSIONS. THE METHODS OF AGRICULTURAL CULTIVATION; THE SCALE OF HOLDINGS; WHETHER CULTIVATION SHOULD BE BY INDEPENDENT PROPRIETORS OR TENANTS; THE FORMS AND FREQUENT OPPRESSIONS OF TENANTRY, WERE THE BASIC QUESTIONS. THESE LAST, AS ONCE IN FRANCE AND LATER IN MEXICO AND CUBA, NOT

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THE QUESTION OF CAPITALISM VERSUS SOCIALISM, PROVIDED -- AND NOW IN CENTRAL AMERICA PROVIDE -- THE SEEDS FOR REVOLUTION. THEY, NOT THE QUESTION OF CAPITALISM OR SOCIALISM, ARE THE ISSUES RELEVANT TO THE AGRICULTURAL STAGE OF ECONOMIC DEVELOPMENT.

NOTHING HAS BEEN MORE FUTILE AND, ON OCCASION, MORE DANGEROUS IN THESE LAST DECADES, AND MORE COSTLY ALSO IN NATIONAL EFFORT AND LIVES, THAN THE DEBATE AS TO WHETHER THE NEW, LARGELY AGRICULTURAL COUNTRIES EMERGING INTO NATIONHOOD AFTER WORLD WAR II SHOULD HAVE A CAPITALIST OR A SOCIALIST PATTERN OF DEVELOPMENT. TO THE AGRICULTURAL COUNTRY BOTH PATTERNS ARE IRRELEVANT; AGRICULTURE HAS ITS OWN SYSTEM. I PARTICULARLY ADMIRE THE ACCOMPLISHED IDEOLOGIST WHO, ON PASSING THROUGH AN ASIAN JUNGLE, CAN TELL WHETHER IT IS A CAPITALIST OR A COMMUNIST JUNGLE. HE APPARENTLY CAN EXERCISE A SIMILAR SKILL WHEN HE COMES TO AN AGRICULTURAL VILLAGE. AGRICULTURE HAS ITS OWN AND DIFFERENT DESIGN, GIVEN NOT BY IDEOLOGY BUT BY THE PRACTICAL ACCOMMODATION TO AGRICULTURAL

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NEED AND CIRCUMSTANCE. WE MAKE A GRAVE, EVEN FOOLISH, MISTAKE WHEN WE CARRY OVER TO AGRICULTURE THE IDEOLOGICAL CONCEPTS RELEVANT TO THE MATURE INDUSTRIAL WORLD. AND IN DOING SO, WE DELAY OR ABORT THE VERY DEVELOPMENT WE SEEK. WE MUST, AS MARX HIMSELF URGED, LEAVE THE UNDOUBTED PLEASURES OF THE DEBATE AS BETWEEN SOCIALISM AND CAPITALISM UNTIL THERE IS CAPITALISM. WE MUST, INSTEAD, ACCEPT THE EXISTENCE OF AN EARLIER THIRD SYSTEM -- THE AGRICULTURAL SYSTEM -- AND IDENTIFY AND PURSUE THE POLICIES RELEVANT THERETO. LET ME SUGGEST WHAT IS THE ESSENCE OF AN AGRICULTURAL SYSTEM.

THE AGRICULTURAL SYSTEM HAS ONE BASIC DESIGN THAT IS BOTH SOCIALLY STABLE AND ECONOMICALLY EFFICIENT. THAT IS THE CULTIVATOR-OPERATED LAND HOLDING -- THE FARM UNIT OVER WHICH RESPONSIBILITY LIES WITH THE MAN OR WOMAN WHO WORKS IT, ONE WHICH IN SCALE IS RELATED TO WHAT THE OPERATOR CAN ACCOMPLISH WITH HIS OR HER OWN LABOR AND INTELLIGENCE. IN STRIKING MEASURE IT IS THE ONE -- THE ONLY -- AGRICULTURAL STRUCTURE

WHICH, IF EXISTING, NO ONE SEEKS TO CHANGE.

NOTHING OVER THE CENTURIES HAS BEEN MORE PERSISTENT AND EVEN ELOQUENT THAN THE EFFORTS OF LANDLORDS TO MAKE THE CASE FOR LARGE AND PERSONALLY REWARDING HOLDINGS. AND TO PROCLAIM THEIR AFFECTION AND COMPASSION FOR WORKERS, SHARE-CROPPERS AND TENANTS AND THE NEED OF THE LATTER FOR A SUPERIOR GUIDING INTELLIGENCE. NEITHER AS TO EFFICIENCY, STABILITY NOR INTELLIGENCE HAVE THEY MADE THE CASE. NOTHING, AS I EARLIER INDICATED, HAS BEEN MORE CONDUCIVE TO SOCIAL TENSION OR REVOLUTION, OR SO REMAINS TO THIS DAY. THE CULTIVATOR-OPERATED LAND HOLDING MUST BE CENTRAL TO ALL DISCUSSION OF AN AGRICULTURAL SYSTEM.

FROM THE CASE FOR THE CULTIVATOR-OPERATED FARM UNIT THERE COMES, IN ANY DISCUSSION OF THE AGRICULTURAL SYSTEM, THE QUESTION OF LAND REFORM. LAND REFORM IS WIDELY CELEBRATED IN PRINCIPLE, BUT IT IS WONDERFULLY RESISTED IN PRACTICE. THERE HAVE BEEN IN THESE LAST DECADES AROUND THE WORLD FAR MORE LAND REFORMS IN LEGISLATION THAN IN FACT. THIS HAS BEEN ESPECIALLY

SO WHEN THE POLITICAL POWER STRUCTURE THAT REFLECTS THE LANDED INTEREST HAS REMAINED INTACT. IN TALKING OF LAND REFORM, WE MUST ALWAYS BE CAREFUL TO DISTINGUISH BETWEEN WHAT IS ON PAPER AND WHAT IS REAL.

IT HAS BEEN ONE OF THE CLEAR LESSONS OF MODERN SOCIALISM THAT IT DOES NOT EASILY PREEMPT THE SELF-MOTIVATED FARM PROPRIETOR. THERE ARE SERIOUS PROBLEMS OF EFFICIENCY AND MOTIVATION IN THE LARGE-SCALE STATE FARM OR COLLECTIVE. AGAIN THE EVIDENT FACT: THE NEW COUNTRIES MUST NOT BURDEN THEIR AGRICULTURE WITH THE IDEOLOGICAL BAGGAGE OF THE DEVELOPED LANDS. AGAIN THE SEPARATE CHARACTER OF THE AGRICULTURAL SYSTEM.

THE NEXT CHARACTERISTIC OF THE AGRICULTURAL SYSTEM, AS DISTINCT FROM THE MODERN INDUSTRIAL SYSTEM, IS THE CRITICAL ROLE OF EDUCATION. THIS IS PARTICULARLY TRUE IN THE BASIC OWNER-OPERATED PROPRIETORSHIP JUST MENTIONED. THE REQUIREMENTS IN THE EDUCATION AND INTELLIGENCE OF WORKERS ON THE LARGE

LANDED HOLDING, BOTH MEN AND WOMEN, ARE MODEST. THE CASE IS THE SAME FOR TENANTS AND SHARE-CROPPERS. MATTERS MAY EVEN BE BETTER FROM THE LANDLORD'S VIEW IF HIS PEOPLE ARE NOT INCONVENIENTLY INTELLIGENT. (LANDLORDS HAVE RARELY BEEN DILIGENT PROPONENTS OF SCHOOLS.) THE INDEPENDENT PROPRIETOR MUST, HOWEVER, BE INTELLECTUALLY COMPETENT. THUS THE COMPELLING NEED IN THE AGRICULTURAL SYSTEM FOR A GOOD EDUCATIONAL SYSTEM.

HERE, AGAIN, THE MATURE INDUSTRIAL COUNTRIES HAVE GRAVELY MISUNDERSTOOD THEIR OWN HISTORY. IN THE EIGHTEENTH AND PARTICULARLY IN THE NINETEENTH CENTURY, WHEN THESE COUNTRIES THOUGHT OF THE INSTRUMENTS OF PROGRESS AND DEVELOPMENT, IT WAS THE EDUCATIONAL SYSTEM THAT CAME IMMEDIATELY TO MIND. NOT STEEL MILLS BUT SCHOOLS. SCHOOLS WERE RIGHTLY TAKEN TO BE THE NATURAL COUNTERPART OF AN IMPROVING AGRICULTURE. NO ERROR IN THE ADVICE GIVEN TO THE NEW COUNTRIES IN RECENT DECADES HAS RIVALLED THAT WHICH PLACED INVESTMENT IN INDUSTRIAL APPARATUS AHEAD OF INVESTMENT IN HUMAN CAPITAL.

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EDUCATION, NEEDLESS TO SAY, IS IMPORTANT ALSO FOR ACCEPTANCE AND USE OF BETTER AGRICULTURAL METHODOLOGY AND TECHNOLOGY. THERE IS MUCH IN THE MODERN AGRICULTURAL TECHNICAL PRACTICE OF THE OLDER INDUSTRIAL COUNTRIES THAT IS USEFUL OR APPLICABLE TO THE NEW LANDS. THERE IS ALSO MUCH THAT IS NOT. AN EXTRAORDINARILY DIFFICULT DISTINCTION MUST BE MADE HERE. IN MY YEARS IN INDIA I STRUGGLED WITH THE ASSUMPTION OF AMERICAN AGRICULTURAL ADVISERS THAT IF SOMETHING WAS IN SUCCESSFUL USE IN IOWA OR RECOMMENDED BY KANSAS STATE UNIVERSITY, IT WAS APPLICABLE, PARI PASSU, TO THE PUNJAB. ATTENTION THAT WAS GIVEN TO HORTICULTURE, HOME ECONOMICS OR POULTRY HUSBANDRY WAS THUS DIVERTED FROM THE ABSOLUTE ESSENTIALS OF CEREAL PRODUCTION, PEST CONTROL AND SOIL AND WATER MANAGEMENT. BUT, AS NOTED, MUCH FROM ADVANCED AGRICULTURAL PRACTICE -- GRAIN HYBRIDS, FERTILIZER, MODERN IRRIGATION METHODS -- IS APPLICABLE. FOR THE APPRECIATION AND USE OF THESE, THE AGRICULTURAL SYSTEM REQUIRES, ABOVE ALL, A WELL-EDUCATED AS ALSO A WELL-MOTIVATED FARM POPULATION. ALSO, IF THEY CAN BE

PRESENT, DISCRIMINATING ADVISERS.

I DO NOT SUGGEST THAT THE AGRICULTURAL SYSTEM -- THE AGRICULTURAL STAGE IN ECONOMIC DEVELOPMENT -- EXCLUDES INDUSTRIAL INVESTMENT. BUT THIS TOO MUST HAVE A STRONG AGRICULTURAL ORIENTATION. ROADS AND TRANSPORTATION FACILITIES, STORAGE FACILITIES, IRRIGATION WORKS AND FERTILIZER PLANTS ARE EXAMPLES OF SUCH AGRICULTURALLY REQUIRED INVESTMENT. SUCH INVESTMENTS MUST BE GIVEN FULL PRIORITY. AND AGAIN IT MUST BE OBSERVED THAT THIS PRIORITY WAS RECOGNIZED BY THE OLDER INDUSTRIAL COUNTRIES WHEN THEY WERE IN THEIR OWN AGRICULTURAL STAGE OF ECONOMIC DEVELOPMENT. THEIR EARLY INVESTMENT -- IN TURNPIKES, CANALS, RAILROADS, DAMS, GRAIN ELEVATORS -- HAD, AS A MATTER OF COURSE, A PRIMARY SERVICE TO AGRICULTURE. SO NOW IN THE NEW COUNTRIES. IT MATTERS LITTLE WHETHER THIS INVESTMENT IS UNDER PUBLIC OR PRIVATE AUSPICES. THIS WAS NOT, IN PAST TIMES, A GREAT ISSUE IN THE INDUSTRIAL COUNTRIES. THE IMPORTANT THING THEN, AS NOW, WAS TO GET THE REQUISITE

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FACILITIES IN THE MOST EFFICIENT AND EXPEDITIOUS POSSIBLE MANNER.

THERE IS ONE INVESTMENT THAT IS SHOULDERED IN THESE DAYS BY MANY AGRICULTURAL COUNTRIES WHICH THE INDUSTRIAL LANDS DID NOT HAVE TO MAKE IN THEIR AGRICULTURAL STAGE. THAT IS INVESTMENT IN COMPLEX MILITARY HARDWARE. WE IN THE UNITED STATES IN A COMPARABLE STAGE OF DEVELOPMENT WERE BLESSED BY VIRTUALLY NO MILITARY EXPENDITURES AT ALL. I BELIEVE THAT THE INDUSTRIAL COUNTRIES SHOULD BE PERSUADED, HOWEVER INEFFECTUALLY, NOT TO SELL SUCH WEAPONRY TO THE NEW COUNTRIES. I HAVE ALSO URGED A RENEWED DETERMINATION AMONG THE NEW COUNTRIES -- THE COUNTRIES OF THE AGRICULTURAL SYSTEM -- NOT TO BUY SUCH WEAPONRY. NOTHING IS LESS CONSISTENT WITH THE AGRICULTURAL STAGE OF DEVELOPMENT THAN A COMPLICATED AND COSTLY MILITARY APPARATUS.

COMING TO MORE TRADITIONAL IF NOT MORE IMPORTANT MATTERS, I WOULD STRONGLY URGE THE ABANDONMENT OF THE PRESENT PRACTICE

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IN NUMEROUS OF THE NEW COUNTRIES OF KEEPING AGRICULTURAL PRICES LOW AS A CONCESSION TO URBAN WORKERS AND DWELLERS OR FOR THE POLITICAL REWARDS FROM STABLE PRICES. THIS IS A POLICY TO WHICH THE FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS HAS DRAWN IMPRESSIVE ATTENTION. (AGRICULTURAL PRICE POLICIES: INTERIM REPORT, 1983.) I AM NOT KNOWN IN THE ECONOMIC WORLD AS AN ENEMY OF PRICE CONTROL; THERE ARE TIMES IN THE DEVELOPED COUNTRIES WHEN IT MUST BE PART OF AN ANTI-INFLATION STRATEGY, WHEN, BETTER AND LESS PAINFULLY THAN UNEMPLOYMENT AND RECESSION, IT ACTS AS A BRAKE ON THE WAGE/PRICE SPIRAL. THERE IS IN AGRICULTURE A STRONG CASE FOR PRICE-SUPPORT POLICIES -- FOR ENSURING TO THE PRODUCER A STABLE AND PREDICTABLE RETURN ON HIS OR HER EFFORTS AND INVESTMENT. THIS IS STANDARD, INDEED UNIVERSAL, PRACTICE IN THE INDUSTRIAL COUNTRIES; IT HAS GIVEN IMPORTANT SERVICE IN COUNTRIES SUCH AS INDIA. BUT ONE MUST REACT WITH EXTREME UNEASE TO THE NUMEROUS EFFORTS IN THE THIRD WORLD COUNTRIES TO KEEP FOOD CHEAP BY PUBLIC ACTION. THE EFFECT IS TO EXCHANGE LATER SHORTAGES FOR

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PRESENT SHORT-RUN POLITICAL ADVANTAGE. BETTER TO PAY THE PRESENT PRICE AS AN ENCOURAGEMENT TO LATER AND GREATER PRODUCTION.

THE FOOD PROBLEMS OF THE THIRD WORLD, NOTABLY THOSE OF SUB-SAHARA AFRICA, ARE AND WILL BE A CHALLENGE TO THE CONSCIENCE AND COMPASSION OF COUNTRIES SUCH AS OURS WITH FOOD TO SPARE. BUT WE SHOULD ALSO URGE STRONGLY AGAINST ANY ACTION THAT DENIES THE LOCAL CULTIVATOR THE FULL MARKET RETURN FOR HIS PRODUCT. TO DO SO, TO REPEAT, IS TO SACRIFICE THE FUTURE TO THE PRESENT.

FINALLY, AS WE CONSIDER THE AGRICULTURAL SYSTEM AND ITS IMPROVEMENT, LET US NOT FORGET THAT THIS DEVELOPMENT MUST BE FOR ALL PEOPLE IN AGRICULTURE -- SPECIFICALLY, FOR BOTH WOMEN AND MEN, AND CERTAINLY NOT FOR MEN ALONE. ALL WHO ARE FAMILIAR WITH AGRICULTURE IN THE NEW LANDS KNOW THE PROBLEM: IT IS THE WOMEN WHO, IN GREAT AND OFTEN INSUPPORTABLE MEASURE, DO THE HARD FARM WORK IN THE NEW COUNTRIES; IT IS THE MEN WHO ENJOY

SOCIAL AND POLITICAL RECOGNITION AND SUCH PREFERENCE IN EDUCATION, LIVING STANDARD AND LEISURE AS CAN BE AFFORDED. IN MY YEARS IN ASIA I COULD NEVER HELP NOTICING THAT IT WAS THE MEN WHO SHOWED UP FOR MEETINGS ON BETTER AGRICULTURAL METHODS; THAT IT WAS ALSO THE MEN WHO GAVE THE INSTRUCTION; AND THAT IT WAS THE WOMEN ONE SAW, AS ONE WENT TO AND CAME FROM SUCH MEETINGS, AT WORK IN THE FIELDS.

EQUALITY AS BETWEEN THE SEXES MUST BE A PRIMARY GOAL IN WHAT I'VE CALLED THE AGRICULTURAL SYSTEM. THIS IS A MATTER THAT HAS LONG BEEN RECOGNIZED, EMPHASIZED IN PRINCIPLE IF NOT IN PRACTICE. IT IS NOT ONLY A COMPELLING SOCIAL NORM; IT IS ALSO AN ECONOMIC REQUISITE. ONLY WHEN WOMEN ARE FULLY AND INTELLIGENTLY A PART OF THE AGRICULTURAL SYSTEM DOES DEVELOPMENT PROCEED IN AN EFFICIENT WAY. IN PAST TIMES SLAVERY, PEONAGE AND SERFDOM WERE CLEARLY SEEN AS BRAKES ON AGRICULTURAL DEVELOPMENT AND SUPPORTING TECHNICAL PROGRESS. SO IT IS STILL WHERE WOMEN ARE THE SOURCE OF SUBORDINATE, ABJECT AND UNENLIGHTENED TOIL.

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IMPROVEMENT NO ONE WILL THINK TO BE EASY. ONE CAN TALK MORE READILY ABOUT CHANGING FAMILIAL RELATIONSHIPS THAN ONE CAN EXPECT TO ACHIEVE SUCH CHANGE. TO HAVE WOMEN AS A WORKING CLASS IS FAR FROM UNPLEASANT FOR MEN. IN ALL LANDS, IN ALL CULTURES, HARD PHYSICAL WORK IS GREATLY PRAISED -- FOR OTHER PEOPLE.

I RETURN TO MY MAJOR POINT: ECONOMIC LIFE IS A PROCESS -- A CONTINUING PROCESS OF TRANSFORMATION. THIS WE CAN HARDLY FAIL TO RECOGNIZE; ITS PRACTICAL IMPLICATIONS, HOWEVER, WE SYSTEMATICALLY DENY. COUNTRIES IN THE LATER STAGES OF DEVELOPMENT LOOK, NOT WITHOUT SATISFACTION, AT THEIR OWN ACHIEVEMENTS AND THEIR OWN IDEOLOGICAL DESIGN AND URGE THEIR MODEL ON THE EARLIER STAGES. COUNTRIES IN THE EARLIER STAGES LOOK NOT WITHOUT ENVY ON THE LATER STAGES AND ASSUME THAT POLICIES AND ACTIONS THERE APPLICABLE CAN BE TRANSFERRED TO THEM. A CONSPIRACY, AS IT WERE, OF ERROR.

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Prepared Statement of John W. Sewell, President, Overseas Development Council

MR. CHAIRMAN, I am pleased to have been invited to testify on mechanisms for increasing food security and food self-sufficiency among poor farmers in Africa. This subject has received increasing attention over the last few years, and is of considerable importance for the developing countries and the United States.

I have structured my testimony to provide substantive recommendations which go beyond a set of generally-agreed upon concepts relating to African agriculture. I will also go into some detail about the dramatic success of Zimbabwe's agricultural policies for small farmers in order to show what is possible in African states when the government is committed to increasing food produced by small farmers.

The views expressed in this testimony are my own, and do not necessarily reflect those of the Board or staff of the Overseas Development Council. I have drawn upon, however, the work of the Committee on African Development Strategies, a joint project of the Overseas Development Council and the Council on Foreign Relations. I have attached a copy of the Committee's report, "Compact

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for African Development." I have also benefited from the twenty studies commissioned by the Committee on the long-term strategies Africans, with the help of others, need to put into place to best resolve the myriad problems they face.

The Compact for African Development is a response by a group of distinguished Americans to the development crisis in Sub-Saharan Africa. The Committee met for nearly a year to develop recommendations for donors, the African governments, and the private sectors in both the U.S. and Africa. The work of the Committee itself demonstrates the significant agreement among Americans that the U.S. needs to adopt long-term policies towards Africa, and support those African countries willing to work constructively to resolve the many developmental problems which remain Sub-Saharan Africa's scourge.

And I have drawn upon the work of my colleagues at the Overseas Development Council. Robert Berg, who serves as Co-Director of the Committee on African Development Strategies, has presented a paper, "Prospects for the U.N. Special Session: A U.S. View," at the North-South Roundtable meetings held last month in Khartoum and Nairobi which is attached. He suggests a number of steps which can be taken by the United States, even in the current climate, to support African development. These include a series of low-cost recommendations for donors and African governments, including examining all new projects that have not been started to see which are not absolutely essential, with explicit agreement that the money saved by scrubbing those projects be used for economic recovery purposes. In addition Anthony Gambino did the research and helped prepare this presentation.

Ensuring food security for all Africans is at the heart of what we mean by development. Yet Africa still is tragically distant from this goal. Sub-

Saharan Africa is the only region in the developing world in which per capita food production has declined over the last quarter century. In some countries, between the early 1970's and the early 1980's, per capita food production slumped by nearly 30%. Recent estimates by the World Bank indicate that perhaps 200 million people in Sub-Saharan Africa -- half its population -- do not obtain enough calories to sustain an active working life, and that half of those 200 million unfortunates -- 100 million people -- do not even eat enough to prevent stunted growth and serious risks to their health.

Africa's small farmers, who make up between half and three-quarters of the population in Sub-Saharan Africa and grow 70 percent of the food, are crucial to any strategy to abet food production. These are men, women, and children who grow enough food for their own subsistence, with some of them able to market a slight surplus in order to buy household items and pay for their children's education. Although there is no tidy definition of the African small farmer, we can say that, for food production, the "small farmers" are predominantly women and children who cultivate a plot of land of no more than perhaps ten acres.

Let me address a few issues that I believe are germane to the Committee's deliberation.

1. Consensus has been reached among development specialists and government officials in both the donor countries and Africa that all African governments need to focus on strengthening the agricultural sector of their economies.

Too many African governments have ignored agriculture -- some continue to do so -- always with tragic results. African states still spend, on average, only 5 percent of their budgets on agriculture; in Southeast Asia, the nations that have dynamic agricultural sectors spend two to three times as much. The

situation in Africa appears to be improving, and the Organization for African Unity is now committed to increasing the proportion of public funds spent on agriculture to 20-25 percent of government budgets by 1990.

Within a focus on agriculture, it is generally agreed that most African nations must concentrate on developing appropriate policies to encourage small farmer production. What are some of these policies? Certainly, the necessity of allowing the farmer to receive a price high enough to make his or her work pay is one critical policy variable. (I will return to policies for women, who grow perhaps up to 80% of Africa's food.)

Yet, pricing policy, in the absence of other policy reforms, is insufficient to boost agricultural production over the long-term. For example, in one West African nation, Senegal, which has relied almost totally on pricing policy to boost agricultural production, food production per capita has plunged since the mid-1970's. The reason seems obvious in retrospect: adequate prices are a necessary but not sufficient condition for increasing production. For instance, in Senegal in 1984, half the farmers received fertilizer one to two months after the planting season had ended.

A few countries, particularly Zimbabwe, Malawi, the Cameroon, and the Ivory Coast, have made significant gains in agriculture. The example of Zimbabwe is instructive.

The Zimbabwean government, through its Grain Marketing Board, provided incentive prices for maize production. The first increase in the producer price of maize occurred shortly after independence in 1980, when the price was increased by 40 percent. Production increased from 1.6 to 2.8 million tons, as a result of excellent weather, the price rise, and other factors. One of these,

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the transition to majority rule in Zimbabwe, and the unleashing of energies which had been consumed by war, is immeasurable, yet surely was important. But Zimbabwe duplicated its success of 1981 in 1985; it is this story into which I will delve.

Three years of drought, from 1982-1984, brought production declines, until the weather improved for the 1984-85 season. The government raised producer prices for maize in 1984. Equally important, the government announced the price increase four months before the 1984-85 crop was to be planted. This gave farmers enough lead time to respond to the price incentive, and in 1985, with favorable weather, they produced a record maize crop of nearly three million tons. In 1980, small farmers produced ten per cent of the marketed surplus; in 1985, small farmers produced forty per cent of the marketed surplus. Let me emphasize that often-overlooked decisions, such as the timing of a price increase, can have a dramatic impact on a country's ability to attain increased food production.

But the Zimbabwean story does not end here, and, in fact, it does not properly begin with price increases. It begins in 1932, when research aiming at the development of hybrid maize seeds was started. In 1949, after seventeen years of research, the first hybrid seeds were produced in Rhodesia. Zimbabweans in 1986 benefit from this research begun half a century ago.

The combination of good weather, quality seeds specifically adapted to conditions in Zimbabwe, and incentive prices might not have been sufficient to call forth the record production. Two other keys are infrastructure improvements, and institutional linkages. The improvements in infrastructure did not center on building rural roads, as one might imagine. These were in place. Rather,

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throughout those rural areas of Zimbabwe where small farmers predominated, the Grain Marketing Board designated small retail stores as its official purchasing agents. For many small farmers, this was the most important step in inducing them to bring their surplus to market: instead of facing a trek of over thirty miles to reach the nearest place where their maize would be bought, no farmer had to walk more than six miles. Let me emphasize that in areas with bad roads and few vehicles, and that includes a sizeable portion of Sub-Saharan Africa, making sure the marketing mechanism is within walking distance of the farmers is a critical intervention.

Zimbabwe also is blessed with a number of strong, local organizations which, especially in the aftermath of the successful struggle for majority rule, give small farmers political leverage with the government. It has been estimated that almost half of Zimbabwe's farmers belong to some kind of local group or organization. These organizations are almost exclusively the result of private initiative; they are not government-run.

The other crucial elements in the Zimbabwean picture include the ready availability of fertilizer and other inputs, with credit provided, and a strong extension service. And Zimbabwe today has one of the most vigorous agricultural research systems in Africa.

I have gone into such depth with this one case, because I believe it illustrates three particularly noteworthy lessons:

* A successful agricultural policy directed at small farmers consists of a package of measures, not just "getting the prices right" - Some policies relate to price and the creation and sustenance of functioning markets; others to the availability of inputs essential to production; others to the creation and main-

tenance of a strong physical infrastructure; others to fostering a strong educational system; others to extension; and others to agricultural research. A policy which does not attempt to meld all of these runs a high risk of failure.

* Both the public and private sectors have important roles to play - Zimbabwe benefited to an incalculable degree from the vital set of local organizations in which small farmers joined together in ways they considered appropriate; those African countries which do not possess such local organizations need to pursue strategies of local institution-building. And the Grain Marketing Board, a parastatal, was the key force in providing the structure of incentives -- not limited to pricing policy -- which called forth the small farmer surplus.

The private sector in Zimbabwe, and most Sub-Saharan states, is not yet strong enough to provide the set of well-functioning markets needed as part of a productive agricultural sector. It would be a serious mistake to push governments to privatize such critical services until indigenous private sectors can be strengthened. Rather, a wiser policy would work to encourage the development of a strong private sector while supporting the useful roles government plays as it matures. As the private sector expands and is energized, the government should then be encouraged to begin the process of relinquishing functions which ultimately can be efficiently and equitably performed by a healthy private sector, with government in a supervisory position.

* Above all, the government needs to be strongly committed to working with small farmers. Zimbabwe has a thriving, but small, group of commercial farmers, mostly whites who produce both food and cash crops. The country continues to rely upon them. But the successes of the 1980's have not come from the large

farmers; they were already quite efficient. Rather, the Government of Zimbabwe has focused its attention on the long-neglected small farmers; the results are there for all those interested to see.

11. The role of women as the producers of most of the food in Sub-Saharan Africa has been widely recognized. In Zimbabwe, as almost everywhere in Sub-Saharan Africa, women grow a large fraction of the food crops. Beyond noting the importance of women in food production, though, any strategy aimed at helping small farmers must consider the myriad other demanding roles fulfilled by African women. They not only grow cereals and rice, but other crops which remain the backbone of much of Africa's diet: sorghum, millet, cassava, plantains, and yams; and they are responsible for the majority of other family-related tasks.

Production of crops like cassava should be encouraged, but not without attention to certain drawbacks. Processing either the tubers into flour or the leaves into an edible green vegetable dish is extremely time- and energy-consuming -- when done by hand. Women directly benefit from the introduction of appropriate technologies such as low-cost flour mills - as does the entrepreneur who provides this service to the community.

But the entrepreneur cannot flourish if there is no regular supply of the small amounts of fuel needed to keep his machine running or the spare parts essential to the long-term viability of his operation. Nor can he make a profit if the incomes of the local farmers are too low to allow them to consider purchasing such a service. The lessons of Zimbabwe's success return: making progress in these areas requires attention to a series of linked interventions.

Increasing food production in some parts of Africa could begin with providing easier access to water for drinking, cooking, and washing; and alternate,

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more efficient sources of energy, so that women and children need no longer devote many hours each day to the tedium of retrieving water from often distant streams and the search for firewood or other fuel. If the water is clean, then in addition to extra time for agriculture and other activities, many Africans - men, women, and children, would obtain the benefits of better health. If energy is readily available and efforts are made to develop long-term energy alternatives, not only would people have additional time but the devastating trends in deforestation, which poor people often must engage in to be able to cook their daily meals, could be reversed.

There is great potential in Africa for the production and trade of fruits and vegetables, probably organized in the short-term as truck farming to provide additional nutrition for urbanites, and later, perhaps, enlarging in scope and becoming internationally traded products. Truck farming in vegetables is a profitable venture undertaken by many women, and some men, now; but it operates at the margin, marketed informally. Further expansion should be encouraged. It is small farming, just as surely as is growing corn, and the nutritional benefits from the onions, tomatoes, and other vegetables added to sauces can be substantial.

The developmental importance of structuring African educational systems to maximize female literacy and numeracy is another generally agreed-upon policy change. Literate women are more likely to follow better nutritional and sanitary practices, and have fewer children, than those unable to read, write, and add. Literate people are also better farmers. Formal and nonformal education for literacy and numeracy, targeted to reach the poor as well as the more fortunate, needs to continue as a priority.

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The centrality of education's role in the development process is now unquestioned; yet some governments in Africa have cut back on educational services in the 1980's as they have had to cut their budgets. It must be stressed that support for primary education -- and, of course, the training of competent primary school teachers, and the appropriation of adequate amounts of money to offer reasonable salaries to talented, dedicated people -- should not be slashed to satisfy short-term, budget-balancing goals.

The difficult issues involved in striking a balance between investments in primary, secondary, and higher education can only be resolved on a country-by-country basis. However, it can be said that none of these levels should go without attention -- nor be starved for funds.

During difficult economic times, aid has a particularly significant role to play in supporting those governments committed to development since the benefits of investments in education typically take a decade or more to be realized. Thus, with public finances tightening, efforts must be made to shore up the education sector.

IV. The international research institutes have made significant contributions to agricultural development in the Third World, including Africa. Nevertheless, I would like to note that work by these institutes must be complemented by national, or, at least, regional work. Such work would be done, ideally, by Africans, who receive their training in local institutions. Not only is this approach much more cost-effective, it is likely to lead to better-designed and targeted research projects.

Some of the realities of African agriculture, particularly the use of multiple cropping and mixed farming, are under-researched, and, even worse,

techniques and technologies created for monocropped environments often are much less successful when introduced into the intercropped lands of Africa.

Building indigenous research institutions takes a long time: the progress of the mid-1960's in Third World agriculture in Asia and Latin America had its seeds in the aid investments of the mid-1950's. Programs for Africa, unfortunately, were started later, efforts were more fragmentary, and generally short-term. Ironically, the shift in aid funding in the 1970's to satisfying the "basic human needs" of "the poor majority" frequently meant that the long-term process of building viable agricultural research institutions was slighted.

Indeed, in some countries aid programs placed the cart in front of the horse by allocating significant resources to extension programs without strengthening the research capacity to develop and design the products and processes needed by the extension service. The two -- extension and research -- need to be considered together.

Of course, any sound research program must pay close attention to the environmental effects of agricultural crops and methods, both those presently used and those considered for future adoption.

On-farm research, in collaboration with small farmers, appears to be one of the most efficient approaches for fostering innovations in smallholder agriculture. By placing the small farmer at the center of both the research and extension process, the likelihood of developing appropriate, replicable agricultural inputs and methods is enhanced. This is not a replacement for genetic research to develop hardy, more drought-resistant crops; but it is an essential complement.

Because of its overwhelming importance in Sub-Saharan Africa, increasing the productivity of rainfed agriculture must be given priority over costly

investments in expanding irrigation. Also, small-scale, locally-managed irrigation and drainage projects are generally more cost-effective than large-scale, more conventional investments in irrigation. Large-scale schemes should concentrate on rehabilitating and improving the management of extant irrigation infrastructure.

V. The nomadic pastoralist system makes sense for many of the roughly twenty to thirty million people in Sub-Saharan Africa who rely on livestock for their living. Most of these people live in the drylands: from the Sahel through the Horn of Africa, and south through the semi-arid lands of East and Southern Africa. Yet no sector of African agriculture has been as badly bruised by efforts at development as this one, particularly through various, ill-conceived resettlement attempts.

Nomads are difficult to tax, educate, draft into the army, and, generally, to control. African governments traditionally have been suspicious of them for these and other reasons, and have adopted policies encouraging or forcing the settlement of nomads.

When nomads become sedentary, if they maintain their large herds in dry areas, the result is rapid desertification and, when drought comes, large losses of livestock. The challenge for African governments and donors is to allow nomads to retain their traditional cultures while integrating them into a country's development efforts. Any such policy must recognize the importance of draft animals to African agriculture, and that livestock functions as a storehouse of wealth -- a four-legged savings bank -- for many cattle owners.

VI. The position of the United States remains critical. The upcoming U.N. Special Session on the Critical Economic Situation in Africa, May 27-31, can and

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should be an important forum for discussion of strategies for African agricultural development, and a compact for the long-term development of Africa. Many of the strategies I have suggested are very low-cost; few remain controversial. The U.N. Special Session is the appropriate forum for a more formal announcement of areas of agreement.

Americans do not yet fully perceive that African governments, by and large, stand ready to act. They know African governments have made mistakes in the past. But in the past few years many of these governments have made positive changes in their development priorities and management structures.

But recognition of the problems and the policy changes is not enough. Africa faces an economic crisis now: African governments lack adequate funds to move forward with the development of their societies. Today's development efforts in Africa are not centered on gaining new capacities, but recovering the full use of already extant infrastructure and human energy. Unless the international community responds generously, we face the probability that the strong, pro-reform atmosphere now pervasive in Africa could quickly vanish. It would be a tragedy to miss this opportunity.

With serious budget constraints facing the U.S. aid program, it becomes particularly important for the Congress to identify what is essential, and what can be cut or eliminated, not only in African aid, but in all our development and security assistance programs. Maintaining the strongly pro-reform attitudes of many African governments deserves our continued support.

In this context, I would like to mention the centrality of effective population programs for many Sub-Saharan African countries. If population growth continues to outrun that of GNP, as it did in ten Sub-Saharan African countries

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between 1960 and 1982, and that of food production, as it did in 33 out of 39 Sub-Saharan countries between the early 1970's and the early 1980's, then it will become increasingly arduous to conquer the already complex development issues facing Africa. The U.S. government should do all it can to encourage the effectiveness of population programs in Sub-Saharan Africa.

The eighth replenishment exercise for the World Bank will soon be upon us. Given the prospects for Africa, an adequate level of resources for IDA VIII is essential. Twelve billion dollars, the level of IDA VI, is barely adequate; 10.5 billion is surely too low. Probably a total of fifteen to sixteen billion dollars would be necessary to address the pressing needs of the low-income countries in Africa and elsewhere. The high figure, however, is probably unrealistic; the $12 billion figure is absolutely necessary.

One of the most effective international agency working on small farmer issues in Africa is the International Fund for Agricultural Development (IFAD). I applaud the recent release of U.S. funds as part of IFAD's second replenishment. IFAD deserves continued U.S. support, and I hope that their Special Program for Africa, which will only require modest funds from the U.S., will be supported by the Congress and the Administration when it is considered later this year.

The U.S. aid program for Africa must be more tightly focused to concentrate on Africa's development needs. While freeing Africa's markets is necessary, so is the education of the continent's children. Both merit healthy levels of U.S. support. In this light, I would like to mention the importance of the Kennedy-Kasten bill, now introduced in the Senate as Bill S-2208. This is a working draft of a Bill, with a growing number of Senate co-sponsors, now seven.

The Kennedy-Kasten Bill addresses a still unmet need for the U.S. to discuss, develop, and implement a long-term strategy on the U.S. role in the development of Sub-Saharan Africa. It merits the careful attention of both Houses of Congress.

We cannot prevent the return of drought, but we must prevent any recurrence of famine. Small farmers are the front-line troops in this war. They must be supported.

Thank you very much for the opportunity to testify.

PROSPECTS FOR THE U.N. SPECIAL SESSION:

A U.S. VIEW

ROBERT J. BERG*

PREPARED FOR THE NORTH SOUTH ROUNDTABLE SERIES

"BEYOND THE FAMINE - NEW DIRECTIONS IN DEVELOPMENT"

KHARTOUM AND NAIROBI

MARCH 1986

It is an honor to address a few remarks to such important leaders. The North South Roundtable is performing a valuable service in holding this series while the positions of major groups and countries are still being formulated for presentation to the final preparatory meetings leading to the United National General Assembly Special Session on Sub-Saharan Africa.

In Sri Lanka in 1979 I was present when the Roundtable undertook to propose what in 1981 was to be the Cancun Summit. More than most groups, the Roundtable must know the requirements of being idealistic while also being pragmatic. These are values we must also draw upon in our recommendations in this series.

We are now in a time when the concern of the world about Africa's survival is diminishing as food production recovers due to unusually good rains and as fuel prices drop helping ease constraints for fuel importers. Neither good rains nor low fuel prices can be counted as a long term trend. But they do serve to diminish the political imperatives in a number of states, particularly the donor nations, to consider bold actions to address Africa's more fundamental and long term problems. The United Nations Special Session may well be the last chance for several years to capture international good will for Africa and to seriously consider cooperative solutions to an inter-related mix of problems

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which have added up to the most serious development problematique in the world.

The U.N. session will be a time to focus attention on key issues. It will not be a time to broach an extensive agenda nor to try the politically impossible.

I come to these meetings after two years of intensive effort to help my country find its own approach to helping Africa resolve its fundamental problems. The Committee on African Development Strategies saw two needs in the U.S.: to propose long term U.S. policies to provide a comprehensive approach to fostering Africa's development (whereas at present only a partial approach exists); and to lend significant political support to our conclusions. It was clear to some of us through the painful experience of 1983-84 in mobilizing actions to address the famine, that extraordinary support is needed to obtain a U.S. response commensurate with Africa' challenges for long term social and economic development. We needed ideas plus powerful voices.

The Committee on African Development Strategies is a "blue ribbon" group of Americans chaired by Ambassadors Lawrence Eagleburger (now President of Kissinger Associates) and Donald McHenry (well known in Africa from his years as U.S. Ambassador to the United Nations). Our report, "Compact for African Development," issued in December, 1985, has been very well received by the U.S. press, donor organizations in the OECD countries, and a number of African leaders. Legislation drawn from the substance of the report is expected to be jointly introduced in the U.S. Senate by the conservative Senator Robert Kasten and the liberal Senator Edward Kennedy.

There is no need to repeat the report here, but some of the key conclusions are worth mention.[1] As a result of widespread consultations with key officials,

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[1]Copies of the report and of the background papers commissioned by the Committee (to be published by the University of California Press in May 1986)

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scholars and observers from Africa, Europe and the U.S., and after reviewing the results of some 20 studies commissioned by us, we concluded that there was an unprecedented consensus on Africa's long term problematique and on the outlines of solutions. This in itself is the most important asset which will be available at the U.N. Special Session.

The consensus is well known and can be summarized briefly:

1) There needs to be a shift of national and international attention from relief to recovery and on to the resumption of long term development tasks.

2) Reforms are often required and these require not only internal political will, but often external financial support.

3) Agricultural production, particularly food production, must be enhanced through more intensive means of cultivation; this ultimately requires technologic breakthroughs which are yet to be and must be developed.

4) The population/environment/food production/nutrition nexus cannot be attacked successfully if only parts of these problems are attacked. All parts of this inter-related set of problems need careful long term action.

5) Donor reform is as essential as reform of domestic policies. Thus the "reform" agenda is an international and almost a reciprocal one. In part this reflects the broadening discussion from a preoccupation with issues related to the quantity of resources needed for African development to a concern both with the quantity of resources and the quality of their use.

With these points of general agreement in mind, the Committee made a set of

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will be furnished upon request from attendees of these meetings. I may be reached at the Overseas Development Council, 1717 Massachusetts Avenue, N.W., Suite 501, Washington, D.C. 20036, U.S.A.

recommendations. Most fundamentally it recommended a "Compact for African Development." This it characterized as neither a treaty nor other legalistic arrangement, but a recognition by both African states and major donors that performance should be the uppermost criterion in international aid considerations. Good performance in Africa needs to be far more recognized in aid allocations. Good performance to us means prudent and honest management, and shifts in policies emphasizing better efficiency and necessary reforms. This "Compact" really would entail long term commitments and reform on both sides: policy and administrative improvements on Africa's side and aid levels enhanced in quantity and de-linked from political and commercial considerations on the donor side. In the Preparatory Committee meetings for the U.N. Special Session there has been frequent use of the phrase "contract for African development." We agree with much of what is meant by this phrase.

We also made a few other recommendations which have relevance for the United States in its economic relations with Africa and which may have wider application.

-- We see several improvements needed in food aid. It must shift more to the recovery tasks and therefore ought to be better linked to improving rural infrastructures, perhaps through food-for-work programs such as those which have worked well in Asia. We see a need for longer-term food aid arrangements so that the effects on markets can be more predictable and so that foreign exchange considerations can be better planned ahead. We also find that food aid is very poorly coordinated with other types of aid.

-- Finance for the recovery phase was considered by the Committee. We saw the Baker Plan as a useful first step, but other steps are also necessary. The U.S. has not been very forthcoming in rescheduling or forgiving official

debts. (In this connection it can be noted that many bilateral states have already acted on this question. For example, the U.K. has forgiven some L260 million in loans to African states since 1977.) If the concept of debt forgiveness is too bold there are other options such as long-term stretch-outs and acceptance of repayments in local currency. Further we recommended that the U.S. participate in the World Bank's Special Facility for Sub-Saharan Africa. Subsequent to our report a Congressional initiative did vote the first such participation and this payment has now been made. There has also been a very subtle easing of the U.S. view on rescheduling of official African debts owed to the U.S., but this has been so subtle as to be imperceptible.

— Turning to longer term issues, we recommended that a considerable American effort go into agricultural production stressing environmentally and socially sound practices. This would emphasize small farms, food production and working with women and men who are farmers. We also saw the need for vigorous action to help those African nations which are willing to institute major population programs and we saw special validity to using the International Planned Parenthood Federation and the United Nations Fund for Population Activities in such efforts.

— We stressed the need to foster the private sector within Africa through national measures; but as well through improved practices by Africa's aiding and trading partners, for example through more local and regional procurement by donors and more access to industrial country markets.

— Finally we could not see major strides in long term growth in Africa without substantial additional foreign resources. To this end we recommended a $16 billion replenishment of the International Development Association; an

amalgamation of all economic assistance programs the U.S. extends to Africa under groundrules strictly emphasizing their economic use (rather than their political or rationales); and a tripling of U.S. bilateral and multilateral assistance to Africa from the current level of around $1 billion to a level of $3 billion per year.

The recommendations of the Committee on African Development Strategies are the most forthcoming and politically significant set of proposals on African development now before the U.S. leadership. It is with the experience of helping to produce and foster consideration of these proposals that I wish to comment on the prospects of the U.N. Special Session. It is clear that the Committee on African Development Strategies and I see a need for major reforms and major resources for Africa. In this sense, our report is part of the current orthodoxy of thinking found among many donor leaderships. The question is: how realistic is the call for more resources for Africa? All current signals are to the contrary in the donor community. Budget crises in the U.S., continuing constraints in the U.K. and France; a feeling in Europe that they have made major commitments in the Lome III Convention; more problems in OPEC and no new policies in the USSR regarding Africa add up to a depressing picture. The only bright spots are Japan and perhaps Italy. Thus there are a considerable number of people who see the U.N. session as not too promising. Many in the West are searching for ideas to present in New York which do not have heavy cost implications.

It is easy to see that there could be a collision of views in New York between those with heavy externally oriented demands which will appear too costly to the West and those with heavy internally oriented demands which will appear too politically costly to African leaderships. While these "demands" could be

the making of a "Compact" with each side giving up something, they might also be unproductive unless other factors are brought to bear. Where is the middle ground at present?

BUILD ON THE GENERAL CONSENSUS. It is important to not waste time. There is such unprecedented consensus that states can build on that asset and not risk diminishing it through needlessly confrontational posturing. In fact reforms to enhance the development performance in Africa are taking place in unprecedented number and scope. And, in fact, often these reforms are proceeding with donor support.

As our Committee member Ambassador Donald Easum recently pointed out:

> Burkina Faso is engaged in a nationwide process of fundamental economic and social change. Ghana has taken courageous steps to attack its financial and production problems. Nigeria has announced an austerity budget for 1986 that accepts IMF conditions without asking to borrow its money. Zaire has devalued its currency. Zambia has recognized the folly of its short-term reliance on copper. Tanzania has accepted the failure of the nationalization of its sisal plantations. Botswana and Cameroon have demonstrated impressive financial management in keeping imports within the limits of export revenue. (and) Malawi, Zimbabwe and Ivory Coast have made significant strides in agricultural development." [2]

One could add a large number of other cases, including that of Mozambique and Benin which have undertaken major reorientations of a large number of policies. In fact, the USAID Assistant Administrator for Africa recently did add up the cases of reform in Africa and reports;

-- 14 countries have substantially increased prices paid to farmers for their crops;

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[2]Donald B. Easum, "The African Crisis: Disaster or Challenge" address before Skaarup's Sixth Petroleum Management Seminar, Las Palmas, Canary Islands, January 20, 1986.

-- 11 countries are in the process of reforming or divesting state-owned businesses;

-- 11 countries are attempting to stabilize their economies by reducing government spending;

-- 10 have devalued their currencies to stimulate foreign trade;

-- 9 are restricting public sector hiring, public sector wage increases, or both;

-- 8 have reduced subsidies on consumer goods;

-- 7 have decontrolled some or all consumer prices;

-- 6 have increased energy or utility prices; and

-- 6 have reduced subsidies on agricultural tools, seeds, or fertilizers.[3]

A very important implication of the sweeping reforms Africa is undertaking is that only months ago when the World Bank was establishing its Special Facility for Sub-Saharan Africa they thought that some 8 to 10 countries would be eligible and in fact at least 17 countries now are thought to be eligible.

Added evidence of the seriousness of Africa's resolve to attack more fundamental problems is found in such efforts as the OAU Summit of last July, the First African Ministerial Conference on the Environment held December 16-18, 1985 in Cairo; and the All-African Parliamentary Conference on Population and Development to take place in May in Harare.

I do not mean to paint a rosy picture about African development. After all, we know too well country situations where major changes are not taking place and others where the financial situation is so bad that few offer much

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[3]Mark Edelman, Horizons, January 1986.

hope for change. One even hears senior officials in international donor institutions recommend that some countries be left to "hang out to dry" until reforms and a better financial position materialize...but from where? In such cases, unfortunately Sudan is one such case mentioned, it is as if the international community had run out of creativity or is operating on the assumption that a few penalized "bad" cases may be necessary to invigorate potential and actual "good" cases of reform.

A most critical caveat about the reforms must also be mentioned. In most cases where reforms have been instituted, it is too soon to know the net effects on people. At present one fears that reforms are a form of political art being painted with brooms rather than fine brushes. To a considerable extent the reforms can only endure if peoples perceive a connection in them and their own improved well-being. Most states, including my own, have not been too expert in designing reforms to assure a minimum of pain and a maximum of gain.

But the general mood is that major changes are taking place, that Africa is moving to the agenda which many in Washington in the bilateral and multilateral communities had wished, and that now perhaps the major challenge is to see if the reforms and changes taking place in Africa can be sufficiently backed by the international resources all observers say are necessary to assure their success. In a sense, the onus is moving to the donors.

Yet it must be said that the donors are not prepared for the success of what they have been advocating.

For the U.S., the attitude towards the U.N. Special Sesion is one of sympathy for the problems, but a desire that the session not turn into a pledging session or that high cost solutions be endorsed. One sees this against a backdrop of the following U.S. actions to date:

-- budget trauma in which it is not known whether even existing aid levels to Africa can be held. (Very recently a key Congressman practically instructed the Secretary of State to re-submit his foreign aid budget with the "guidance" that the total economic assistance level be no more $1 billion...roughly the level of aid for economic purposes just for Africa now.)

-- The Baker Plan...as yet not articulated for the poorest countries, but clearly a welcome change in the Admininistration policies and a basis for productive negotiation.

-- Major initiatives to stimulate "privitizing" of government functions in other countries including: a major international conference held last month at which it was clear that countries which privitize can expect to be favored; several legislative changes adding resources to stimulate local private sectors; and actions to stimulate the U.S. private sector abroad, and

-- Perhaps the most positive sign from the U.S. has been its willingness to see the IDA VIII replenishment be higher than the current level ($9 billion). The preliminary agreement is for an IDA VIII of up to $12 billion (including $1.5 billion in the Special Facility) which could be expected to provide Africa with around $6 billion, i.e., $2 billion/year.

Yet all of this does not add up to a coherent nor a fully responsive program. It is a start of such a program and the fear among some of us is that this will be all there is to present at the U.N.

CLEARLY ADDITIONAL RESOURCES ARE REQUIRED FROM THE U.S. AND OTHER MAJOR DONORS THROUGH BILATERAL AND MULTILATERAL PROGRAMS IF RECOVERY AND A MOMENTUM OF CHANGE IS TO BE ASSURED. It is clear that the high debt countries in all categories will not be able to resume meaningful growth without additional

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resources.[4] There can be no serious question about this. But it would be imprudent for African countries to place all their political and economic expectations on being at the receiving end of new cornucopias of aid.

In fact a good starting point may be to see what kind of no or low-cost solutions exist where the donor community and African states can in effect "create" resources without hefty additional drains on budgets. If one cannot find agreements on this kind of list of possible actions, then the prospects of more fundamental agreements may be dismal, at best. But if African states can say yes, let us start with low-cost solutions and agree on them, then we can take up other options, one can assure at least half a victory and probably a much better prospect for progress on the other, more expensive half. My recommendation would be to seek early agreement on most or all of the following 12 propositions...and then to attempt to move on to larger issues.

LOW OR NO COST RECOMMENDATIONS.

1. Domestic and donor assisted project portfolios should be purged of new starts which are not absolutely essential with explicit agreement that such funds will be used for economic recovery purposes. For the donors this would mean a conversion of quite sizeable project pipelines into non-project finance.

2. Improve the quality surveillance of development portfolios. One of the most worrisome trends in Africa is the declining productivity of investment in many countries. Governments are realizing that new quantities of resources will be far from easy to obtain and that a higher quality of development expenditure is necessary. Many governments in both the Third World and other Worlds have found it worthwhile to enhance their audit, monitoring, and evaluation capabili-

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[4] In this regard it may be worth noting the useful categorization which Tony Killick suggested to a meeting on African debt in Washington last month. He listed high debt and high interest countries as Sudan, Zambia, Tanzania, Mozambique and Niger; high debt and moderate interest countries as Madagascar,

ties so that they can better identify both their weak and their strong investments, to delete or change the former and to recognize and perhaps replicate the latter. Both the UNDP and the bilateral donors involved in the OECD/DAC evaluation group (a collectivity I used to chair) are more prepared to extend donor resources for this task. There are also useful lessons to be learned in quality oversight from such countries as India. The costs are low and payoffs considerable both in improved public administration and in better controlling the course of development. A country with its own audit, monitoring, and evaluation staffs can be far less dependent upon donors to define their public administration agenda.

3. Expanding the notion of quality oversight from merely seeing whether projects are worth keeping or not to that of comparative analysis. So much of Africa's development expenditures are furnished by the donors that it would be worth the time of African states to better assess comparative value and performance in their development portfolios. It is practically the same cost for assessment teams to look at several projects in an area rather than ony one project. For example, when I directed the evaluation work at USAID we found in studying potable water supply projects of over a dozen donors in Tanzania, that the Government of the Netherlands had a clearly superior approach. One result of that study was that the Government of Tanzania changed their national policy

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Mauritania, Benin, Equatorial Guinea, and Sao Tome; high debt and low interest countries as Ethiopia, Burkina Faso, Guinea-Bissau, Somalia, Burundi, Comoros and Mali; moderate-to-low debt and high-to-moderate interest countries as Nigeria, Ivory Coast, Zaire, Zimbabwe, Senegal, Ghana, Malawi, and Sierra Leone; and moderate-to-low debt and low interest countries as Cameroon, Uganda, Gabon, Guinea, Liberia, Botswana, Kenya, Congo, Togo and Mauritius. (Killick based on IMF data, presentation to the conference on African Debt held at the Institute of International Economics, Washington, D.C., February 22, 1986.)

to emphasize the kind of potable water supply approach devised by the Government of the Netherlands. An important by-product of this kind of approach would be to stimulate donors to be more quality conscious by in essence holding them more accountable for performance, too. But the main product would be a better sense of what is working relatively better, and learning who are the best partners for given development tasks.

4. A climate of reliability in commercial transactions is terribly important if new domestic and international financial commitments are to be fostered. For foreign investment the question is less that of ideology than one of knowing if commitments are going to be honored. (It is interesting to hear bankers in the U.S. praise Angola and Ethiopia for their reliability in commercial transactions.) The concept is fairly simple and low cost: to the extent that trade instruments are honored, contracts are reliably enforced and government regulations are reliable and predictable, local and foreign people will invest.

5. The Committee on African Development Strategies was often told by leading Africans that "you in the West think we will be successful when Western capital comes to Africa, but we know we will be successful when African financial and human capital comes home." Many billions of dollars in African money is doing Africa little good sitting in Europe, North America and the Middle East. The tens of thousands of degreed Africans in those same places are a drain of another kind of resource which can hardly be afforded. Real international cooperation might be focused on this. For example, finance experts can design very low risk bonds which entail no questions as to the source of funds of the purchasers...so called "white bonds"...which can be used to draw monies home. Donors, such as bilaterals and foundations, might also be asked to help bring back highly trained Africas (e.g., paying return fares and some resettle-

ment costs, in a kind of amnesty program) instead of always paying for new training. Serious attention to these kinds of issues might have real payoffs of a significant nature.

6. Just as the West encourages the African states to reform to stimulate the African private sector, strange as it may seem I urge African states to insist that Western states organize and articulate a coherent set of policies to stimulate foreign investment in Africa. Often these policies exist, but are uncoordinated and not well spelled out. For example, at a meeting a few weeks ago in Washington, a very large and high level delegation from Benin seeking trade and investment found the U.S. poorly organized to answer their question: "just what exactly is the U.S. doing to promote trade and investment in Africa?" There are good answers, and more emerging, but the case is poorly prepared. Indeed neither the West nor African states are as well prepared as they might be to really articulate the opportunities for commerce and investment.

7. Tariff changes among Africa's trading partners are another solution with no budget cost. This clearly is a matter which the Western Economic Summit should pursue (see below).

8. Changes in the way debt negotiations are handled are badly needed. As the report of the Committee on African Development Strategies points out, when a country must tie up its top economic officials for six months to achieve a one year extension of its debt, something is terribly wrong. Among the changes needed are: bringing the relevant parties together so that Paris Club, IMF, the World Bank and major bilaterals (and perhaps the London Club) with loans to Africa are in the same negotiation; re-schedulings along far more reasonable time periods; agreement (wherever possible) to accept repayment in local currency of official debt; and agreement on resource requirements... even when

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the amount needed is not immediately available. One would think, at least on the basis of geographic proximity, that the most fruitful area of new collaboration would be between the IMF and the World Bank. My own view is that the Bank is being receptive to Africa's debt problems, but that this is not the case in the IMF. It is hard for me to escape concluding that the IMF simply wants out of Africa. A no-cost effort by the Western states should be to make unmistakably clear in the IMF Board that a major and continuing role of the IMF is expected in Africa. A further effort would be for both the IMF and the World Bank Boards to direct their staffs to come up with concrete joint proposals for full collaboration on Africa's debt/resource problems which both surfaced agreements and disagreements for oversight by the two Boards.

9. Regionalism is evoked at most conferences as a key part of Africa's long-term future. This has sometimes held more logic in theory than in practice. In part this has been because of a proliferation of regional institutions, many of which, in my view, should be ended to switch political attention and financial resources to those regional groups which should survive and grow. But even if a strict diet is not imposed on the regional organizations as a totality, there is every reason to be sure that key regional institutions do indeed have the resources necessary so they can achieve strongly reasoned and internally negotiated positions on important issues. A low cost, but essential task is to be sure that the ECA and OAU have sufficient resources to meet the needs of being policy centers for sound, respected innovations and initiatives for Africa. The case now is that they are badly stretched and that high costs will be paid for this.

10. Coordination of donors is so frequently mentioned that one wonders why it is still a problem. The old fear of African states that <u>they</u> not the donors

would be coordinated has passed as the costs of continued poor coordination becomes clearer. But Consultative Groups and UNDP Roundtables, useful as they are at the macro level, are not able to straighten out the chaos in the field. What is needed to augment the high level policy discussion fora are sectoral level secretariats to coordinate all donors including the smaller official donors and the non-governmental organizations which do not sit in on Consultative Groups and Roundtables. Such secretariats would be a place to help resolve issues which now tie up so much time of key officials. In my more Machiavellian moods I toy with the notion of suggesting taxing donors who choose to refuse to cooperate with such sectoral coordination bodies. In any case donors should help pay for these coordinating mechanisms.

11. Closely connected with the last point is the need to change the view of donors as a nuisance and turn them into an asset. As one talks with officials in Africa, one is struck with a view of donors not unlike the view of Chinese officials some 40 years ago about their own people. At that time the large number of people in China were seen as their main impediment to growth. Later Chinese leaders were to proclaim their people as a key building block for growth. Similarly, are donors a liability or an asset? Currently in many countries they are seen as an asset which merely require proper management. Through its Institute of Solidarity, Cape Verde has been expert in marketing its development needs to a wide variety of donors. The key point is not to let a large number of donors pull and push governments by coming to them with projects, but for the governments to come to the donors for what it needs. Setting up development marketing centers to market a country's needs among the thousands of non-governmental and scores of official donors active internationally is a low cost, high return proposition. My guess is that donors would pay for these

centers.

12. One cannot avoid the real resource questions forever, and so finally I turn to that one, again with the assumption that low-cost solutions are likely to be acted upon first. My view is that low cost multilateral actions will be attractive at the UN Special Session. Two kinds are possible: those which benefit Asia and free up IDA monies for Africa; and those aimed solely at Africa. The first kind may be politically more attractive. The General Assembly might be asked to urge the World Bank to change its gearing ratio. The Banks might also take up the suggestion of Mahbub al Haq, recent Minister of Finance of Pakistan and past chair of their Roundtable, that a semi-concessional window for Asia be set up at the World Bank so that all IDA funds went to Africa and a few of the other poorest nations. There might also be a call for a special SDR issuance to benefit Africa or Asia and Africa. It is impossible to see how many countries in Africa can pull out of their current situation without major, long-term debt restructuring and new flows of resources. A U.N. Special Session which ducks that issue could not be termed a success.

In this brief review, I have not attempted to address many of the items on our agenda. Africa must be able to offer do-able propositions as part of any negotiating package both to assure that the U.N. session has productive results and to build confidence among the negotiating partners that it is fruitful to negotiate, i.e., to keep all parties involved always working towards the bigger and more resource heavy problems where recovery transits to long term growth tasks.

THE IMPORTANCE OF A UNIFIED POSITION. The virtues of forced unity can be over-stressed, but when one thinks about the U.N. Sepcial Session, there is hardly another approach worth considering. As OAU Chairman Abdou Diouf noted at

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the July OAU summit, "If Africa is not given the appropriate treatment from debt negotiating mechanisms, it is due to the fact that, in the absence of a common platform for action, the real weight of our continent is not felt on the international scene." OAU/ECA will present a common platform in early April for consideration at the Special Session. What will happen then? Will there be the best use of time made in the six or seven weeks before the Special Session begins? Two suggestions are offered.

-- African diplomatic respresentatives in key centers could be instructed to work as a unified group in presenting the African position for the Special Session. This is often difficult for diplomats who are charged with representing a country rather than a whole sub-continent. But it is essential to recognize that especially in countries like my own, few if any African states will be able to carry sufficient weight alone to assure a high level political and a public hearing of the African case. My guess is that this is true in most key First, Second, and Third World countries and yet much is to be gained from unity in all these arenas. (Parenthetically, it is worth noting that some feel that the new leadership in the USSR might be a special target for a unified African stand, and I would add that if Africa pressed for more Eastern activity to help carry the burden of solving its longer term problems, this might not be seen in the West as entirely unwelcome or unhelpful.)

-- A major opportunity to set the stage for successful Western participation in the U.N. Special Session will occur at the Tokyo Economic Summit May 3-6, 1986. The subject of Africa's development problem will arise both as a follow-up to the interests expressed at the Bonn Summit and because some of the delegations plan to raise the topic in conjunction with formulating positions for the U.N. session. It is thus highly important for a unified presentation of

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the African position to be made by African representatives to each of the seven participants of the summit. The scenario I would like to see happen would be that prior to the Tokyo Summit the much esteemed OAU Chairman meet with each of the seven economic summit heads-of-state in the company of the local diplomatic representatives of all the African states, or as a second choice the diplomatic representatives might meet together with the respective Western heads of state. What counts is a firm demonstration of unity and the clear message that good bilateral ties require a good showing at the U.N. Special Session.

As one surveys Africa today, one is tempted to be a short-term optimist and a long-term pessimist. The question now for all participating countries at the U.N. Special Session is whether external resources can be combined with internal resources and resolve to build on Africa's major strengths to change the long term picture. This paper has argued that important opportunities exist for cooperative efforts which have little or no cost in a financial sense, but which do call for political leadership on both sides. Through successful experience in handling these issues there might well be sufficient resolve to rather quickly move on to more expensive items where agreements are needed. By not talking about long-term environmental and economic issues I do not mean to underplay them. I just wish to be sure we get from here to there.

Finally, I must confess to a second agenda. All 12 of my recommendations are intended to build on the most favorable trend in Africa today, the desire of more leaders to be less dependent while producing far better results. Internal institutional steps and external relations must move boldly to reinforce what is a significant development. Africa's next development phase should be a more authentic one if both donors and Africans stress a higher quality and more sensitive pattern of cooperation.

PREPARED STATEMENT OF LEONARD H. ROBINSON, JR., PRESIDENT, AFRICAN DEVELOPMENT FOUNDATION, WASHINGTON, D.C.

Mr. Chairman and Members of the Select Committee, I am very honored and pleased to appear before you today to testify for the African Development Foundation and its program of assistance to African grassroots communities and farmers, in their efforts to increase food production and to improve their quality of life.

Although Africa has been caught in a cycle of ecological, economic, and political uncertainty, the African people are clear in their goals. They want to be self-sufficient...they want to be able to produce their own food once more; they want to be able to feed their families and communities. The Foundation has received in its two short years of operations over 1000 inquiries and proposals for economic assistance to implement projects originated and designed by African organizations and individuals at the grassroots level. The majority of these projects have focused on farming and water management, obviously a continuing crisis for many villages remote from urban areas and municipal assistance. ADF has embarked on an innovative process of funding farm production and

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village development activities that originate and are managed on the farm and in the village.

In the 1970's, experts began to see a developing crisis in African food production. Per capita production decreased on an average of 20 percent throughout the continent, and the ensuing droughts of 1973 and 1964 brought the attention of the world to the tragic plight of people and villages of the Sahel and later, other countries of Africa, particularly Ethiopia and the Sudan. However, agricultural specialists have long argued that Africa's food production problems can rightfully be attributed to socioeconomic causes found in the policies of colonial and post-colonial era governments.

The failure to promote commercial livestock production, attempts to settle nomadic tribes, and the over-farming of fertile land to reap cash exports have all contributed to the agricultural deficit in Africa today. These actions have caused irreparable damage to the continent's ecology systems, stripping once fertile lands of forests and top soil. The relentless desert seems to be creeping over entire villages.

Labor migration of men to faraway plantations and mines has seriously affected the traditional family-intensive efforts in small scale farming and rotation of crops, a technique used by Africans for thousands of years which helped to conserve the soil. Because of the change, eighty percent of farming is now done by women.

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The decline of food production for domestic use has ironically been accompanied by an increase in the production of cash crops upon which many African countries are dependent for their foreign exchange earnings. As in the United States, large commercial companies or agribusinesses have literally trampled the small family farmer, particularly in the rural areas, in order to insure bountiful exports. There's an African saying, "When the elephants fight, it's the grass that suffers." From a grassroots point of view, the manipulations of the powerful has been devastating. To survive, the people of remote villages have had to strategize and fend for themselves as they have done for centuries.

Agricultural extension in Africa developed as a result of the nationalizing of most food production in newly independent nations. Cooperatives were encouraged, and government experts or "extension officers" were sent to advise and counsel. In the most common context, government employees who worked in the rural sector periodically visited farmers in the villages in order to counsel them on various technical matters. These technical matters may have involved crop production, crop protection, health and sanitation, soil conservation, the use of fertilizers, or the correct usage of agricultural machinery. Extension was perceived as moving in a radial from government agencies out to the rural sector.

Extension has only recently been perceived as originating in a rural setting. In the last ten years, for example, large, integrated, rural development projects in the Sahel have attempted to train key farmers who then return to their village after training, set up farming demonstration

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sites, and share the technology learned with other farmers in their own and surrounding villages. Often these programs did not work for various reasons, such as the absence of access to credit for participants to purchase production inputs such as seeds, fertilizer and pesticides. In general, there was a lack of credibility of the "extension farmers", as well as a lack of structure on the village level to sustain the demonstration and replicability components of the activity.

In a recently published book on the small farmer, former US Secretary of Agriculture, Orville Freeman, noted that, QUOTE: "...although there are still millions of farmers around the world who cannot read or write, I have never met a farmer who cannot count."* END OF QUOTE. In a similar vein, ADF has found that many of the grassroots people of Africa may not be able to read, but they have a very keen perception of their own needs, and, yes, they can count.

As you are aware, ADF has for the past two years provided assistance to grassroots organizations and individuals in the private sector of Africa. Our Congressional mandate stipulates that we respond directly to the people, thus eliminating many of the bureaucratic bottlenecks usually encountered in traditional bilateral assistance efforts. As a result of this direct response to people, ADF has been able to shorten the processing time from the receipt of a complete proposal to the delivery of funds to an an average of six months. Time is often the most critical factor for survival of an idea,...a target of opportunity for a specific project or even a community.

*Agribusiness and the Small Scale Farmer, A Dynamic Partnership for Development, S. Williams and R. Karen, Westview Press, 1985.

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At this time I would like to describe four projects we are presently funding that are aimed at increasing food production.

NARENA VILLAGE INTEGRATED DEVELOPMENT PROJECT/MALI, received an ADF grant for $174,485.

This project will directly benefit about 2000 rural Malians. Its aim is the development of water resources for food production. The villagers are constructing a small, 550-yard dike over a stream to retain rain water for dry season food production, and to provide a measure of security if the rains fail. The water will serve village livestock as well. At another location, two deep wells are being hand-dug to furnish water to a five-acre area where village women will grow vegetables.

Nearby, a seasonal community of several thousand gold miners offers a large market for village vegetables. Thus, the project presents the possibility of increasing village food supply and nutritional well-being, but just as importantly, offers great potential for substantially increasing village income. I should point out, nonetheless, that we consider this one of the Foundation's innovative, but high risk innovative projects. It is not yet clear, given both the capital costs and the costs of production, that project activities are economically viable. We are not yet sure the project is sustainable over time. Let me assure you, however, that the villagers are aware of the risks. We are watching this project with special interest to see how the people deal with both the opportunities and the risks. It is too soon to tell the outcome, but we are very encouraged so far.

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THE KENYA BEEKEEPERS' ASSOCIATION for the KIBWEZI HONEY PROJECT/KENYA, received an ADF grant of $75,871.

This grant will increase rural women's income in one of Kenya's drier regions. It will strengthen the operating base of the Kibwezi women and extend existing honey collection and marketing to women's groups in adjoining Makueni and Kitui areas.

The Kenya Beekeepers Association is a non-profit, membership organization composed of beekeeper cooperatives and groups, individuals, commercial beekeeper/packers and firms, and government officials who provide support to beekeeping. The Association was established in 1978, with the aim of promoting the beekeeping industry.

The Kibwezi Womens' Honey Cooperative, a member of the Association, was launched in 1981 and has 82 branches with more than 2,000 members. The Coop has constructed and equipped a new concrete block refinery and marketing building at Kibwezi town. The refinery has a capacity of 600 kilograms of honey per day. With ADF funds the Cooperative is: 1) recruiting new members; 2) training the new members about beekeeping, honey harvesting, and recordkeeping; 3) establishing local collecting/purchasing centers; and 4) storing, processing and marketing honey.

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THE SONGHAI PROJECT/BENIN, received an ADF grant of $133,468.

This project, initiated by the Dominican Mission, took its name from a sophisticated and prosperous civilization that existed in West Africa between the 14th and 16th centuries. It was considered comparable to existing civilizations in Europe and Asia during that era. Today, the spirit of the Songhai Empire is manifested in the form of an integrated, village-based training center focusing on fish culture, crop extension, and small animal husbandry.

The Songhai Project recognizes traditional African, socioeconomic values, while utilizing a systematic approach to farming systems based primarily on market demand. In 1984, the Benin Government granted the project 15 hectares of land at Ouando, and in 1985, 10 more hectares were granted. Of those 25 hectares, approximately seven hectares have been cultivated or are in the process of being cleared for cultivation.

Presently there are 25 full-time student trainees, 13 part-time students and 10-15 part-time laborers involved. Full-time trainees are paid a weekly subsistence salary; part-time trainees work on a volunteer basis, while part-time laborers are hired on an as-needed basis. With a funding source the project is planning to involve a total of 100 student trainees, although over 400 students have already applied for the program.

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Initially the trainees are placed in one of three areas of specialization in which they receive core training in: 1) fish culture and animal husbandry; 2) agriculture; and 3) administration. One trainee is selected each month to be responsible for all phases of the general operation, thus enabling him to get hands-on experience in administrative functions necessary to operate an enterprise. Economic self-sufficiency for the project is projected in four years as a result of the construction of 84 revenue-generating fish ponds. Each trainee will be expected upon graduation to found their own mini-Songhai project in their home village, thereby sharing what they have learned from the project.

The principle goals of the Songhai Project are to: 1) independently train and support a population of 100 trainees within a four-year period; 2) achieve economic project self-sufficiency in four years; and 3) directly and indirectly increase regional food production and available protein through the return of trained students to their home villages and farms, where it is expected that they will utilize and share their knowledge of farming systems methodology.

Fish culture is the area of emphasis at the Ouando site, primarily because fish is the traditional source of animal protein in this coastal region. At the present time, 11 concrete tanks and eight earthen ponds have been constructed and are being used in different aspects of the culture of fish. Plankton "blooms", fed by project-generated poultry manure and a supplemental feed, serve as the food source for the cultured fish, while nutrient-rich water from the tanks is used directly for the irrigation of the crops.

The Songhai Project expects to reverse the acceleration of socioeconomic problems facing young people by capitalizing on and applying the human values still intact in rural villages.

FARMING SYSTEMS KENYA LTD, received an ADF grant of $58,468.

A non-profit, private sector organization, Farming Systems Kenya (FSK) is run by a dynamic young Kenyan, Paul Maina, who received a Master's Degree from Cal Poly and returned home to manage this fledgling organization.

His basic idea is that farming is a business. The purpose of the project is to increase farmers' production to the point that they become commercially credit-worthy.

From a large pool of applicants, Paul Maina and his team of agriculturalists select both men and women, and train them in modern farm techniques. From this group, some are chosen for more intensive training in crop and livestock production techniques as well as in recordkeeping. The best of these trainees become eligible for seasonal credit of $100 for land preparation, seed, fertilizer, and pesticides. They are also eligible to receive a three-year old heifer to raise on a trial basis.

The FSK specialists provide technical assistance to the farmers, for example, in soil testing and seed selection. They assist with marketing, planning, and making sure that inputs are received when needed.

To help cover recurrent costs, FSK requires farmers to pay an annual interest rate of 14% on their seasonal credit. If the farmer successfully cares for the heifer, he gets to keep it, but must pay 25% of its value as a yearling. Subsequently, he/she must also turn over the heifer's first offspring to FSK, which then passes it on to another farmer.

Although Farming Systems Kenya has existed since 1981, the ADF grant enabled it to really get going. In 1985, FSK started working with 91 farmers, and in 1986, 187 will be added.

The response has been excellent. This innovative program is helping farmers make money. It must be attractive, for FSK has more applications that it can accommodate. What ADF is most interested in now is whether the project can become self-sufficient. Again, it is too soon to tell, but the prospects look very good.

Mr. Chairman, this is a small sampling of proposals ADF has processed and approved for assistance at the grassroots level. As you can readily see, the Foundation focuses on outreach and appropriate technology in assisting poor farmers to increase their production. If you will look at the ADF Funded Projects booklet, you will note that the 56 assorted projects we have funded and approved have one basic purpose in mind -- DIRECTLY ASSISTING THE AFRICAN RURAL AND URBAN POOR IN IMPROVING THEIR LIVING CONDITIONS AND STANDARDS.

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In closing, I would like to quote from a recent book by Brian Walker, former Director General of Oxfam, England's largest PVO and relief organization:

QUOTE:

"There lies within the African people not only immense patience but a buoyancy and generosity of spirit that is worthy of emulation around the world. Perhaps because of their capacity to work with nature, to live within the interstices of a volatile climate, to harmonize community living with the demanding conditions of their environment, and to laugh in the face of adversity, Africans are survivors first and foremost. Those human qualities, lying deep within the African character, forged out of thousands of years of experience, provide a stable and immensely powerful foundation on which to rebuild Africa. Africa's hope lies essentially with the African people. The rural poor are an asset, not a liability. With modest support from the outside, they have the capacity to rebuild their great continent."* END OF QUOTE

*Authentic Development in Africa, by Brian W. Walker, Headline Series, No. 274, Foreign Policy Association, HS-274, 1985.

enclosure: ADF Funded Projects

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AFRICAN DEVELOPMENT FOUNDATION

May 16, 1985

STATUS REPORT: AFRICAN DEVELOPMENT FOUNDATION

AGRICULTURE: DEVELOPMENT ASSISTANCE

The African Development Foundation, which provides funding to indigenous grassroots community development organizations and groups, has and will continue to address the omnipresent issue of hunger on the African continent through its grants process.

A total of $3,417,460 has been allocated to 38 projects in 14 countries since February, 1984. These agriculturally based projects include food production, irrigation, food storage facilities, marketing, animal husbandry, new or adapted technology, and training. The projects represent 44% of ADF's present grants.

Chart I illustrates activity and impact of ADF funded agriculture projects:

GRANTS	Total Acres			Irrigated Acres			Beneficiaries: Direct			Beneficiaries: Indirect			Persons Trained			New or Adapted Techniques			African Technical Assist		
COUNTRIES	SOP*	GOAL	STAT**	SOP	GOAL	STAT	SOP	GOAL	STAT	SOP	GOAL	STAT	SOP	GOAL	STAT	SOP	GOAL	STAT	SOP	GOAL	STAT
Benin	18	63	23	18	63	23	25	100	25	100	500	100	25	100	25	2	5	2	10	115	10
Botswana	1	566	251	0	0	0	95	200	95	350	1700	350	95	220	95	2	2	2	6	6	6
Ghana	0	0	0	0	0	0	395	1800	395	0	27738	0	395	1800	395	0	10	10	2	15	4
Kenya	1895	3700	2200	37	635	37	5200	40000	20000	24200	156000	59000	314	1531	1854	1	11	7	0	35	53
Lesotho	0	2	2	0	0	0	135	300	135	1000	3400	1000	8	3	8	6	6	6	8	8	8
Liberia	0	0	0	0	0	0	60	150	100	0	700	0	60	157	100	2	13	10	2	21	4
Mali	150	738	163	125	588	125	2175	2475	2175	16670	18770	16620	22	690	322	2	8	6	11	19	16
Niger	67	263	67	0	1116	100	678	686	678	1225	25675	2475	17	105	47	2	20	3	1	38	4
Rwanda	122	422	5200	0	30	5	930	930	413	75	186000	6000	36	860	600	0	0	0	0	9	74
Sierra Leone	837	2042	837	0	0	0	26	565	290	0	10300	100	0	450	90	0	6	6	12	28	19
Somalia	0	45	0	0	45	0	0	300	0	0	3000	0	0	60	0	0	3	0	0	7	0
Tanzania	30	3000	30	3	30	3	400	4000	400	3000	28000	3000	400	4000	400	0	3	0	0	2	0
Togo	56	112	56	0	0	0	200	400	200	1000	2000	1000	15	45	15	0	0	0	14	68	14
Zimbabwe	1765	10015	3765	0	0	0	1148	8500	1148	8700	31000	8700	1126	8000	1126	6	6	6	225	35	25

Since the beginning of Fiscal Year 1986, ADF has received 178 proposals from 21 countries.

The requested funding level totalled $9,099,334. Of these proposals 80 or 45% were agriculturally related. Countries, number of projects, and requested funding levels can be found in Chart II.

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* SOP: Start of Project
**STAT: Status

COUNTRY	FOOD PROJECTS	FUNDING LEVEL	COUNTRY	FOOD PROJECTS	FUNDING LEVEL
Benin	1	$133,000	Niger	5	$392,000
Botswana	2	61,299	Rwanda	2	406,000
Ghana	2	72,000	Sierra Leone	3	306,000
Kenya	8	732,000	Somalia	1	55,000
Lesotho	2	42,931	Tanzania	1	134,000
Liberia	2	119,000	Togo	1	112,000
Mali	5	668,000	Zimbabwe	3	184,230
		$1,828,230			$1,589,230
	GRAND TOTAL				$3,417,460

With four more months in this fiscal year, ADF anticipates upwards of 40 more requests for funding of agriculturally related projects.

The increase in grant proposals, the demonstrated impact being made by the recipients of those grants (Chart I) makes it clear that ADF and its development approach is indeed viable. Although ADF's resources, budget and staff, are miniscule in comparison with other government-funded development efforts, and though it has recently emerged on the development scene, impact has been made. The partnership of ADF and community development organizations and groups serve as a testament to the ability of African people to determine their needs, manage projects that they design, learn from the experience, transfer skills, and move on the continuum toward self-sufficiency. The African Development Foundation is proud of being part of that process.

PREPARED STATEMENT OF PHYLLIS N. WINDLE, PROJECT DIRECTOR, OFFICE OF TECHNOLOGY ASSESSMENT, U.S. CONGRESS

Thank you Mr. Chairman, for asking OTA to discuss our work on technology and agriculture in Africa and to provide an update on the project that we have underway now. I am Dr. Phyllis Windle of the Office of Technology Assessment, the Project Director of OTA's work on "Low-Resource Agriculture in Developing Countries: Implications for Africa." Also, I directed the work that OTA did, at your request, that resulted in Africa Tomorrow: Issues in Technology, Agriculture, and U.S. Foreign Assistance.

I will address several items today. My major points are as follows:

- "appropriate" technology is suited to specific local environmental conditions and matched to the needs of local people. Researchers and government officials who do not work directly with farmers and herders often do not have this type of local knowledge.
- identifying local problems and needs is difficult for off-site decision-makers because methods to do so are scarce and seldom applied. This is especially true for designing and implementing effective large-scale development assistance programs.
- the absence of clearly identified local problems and needs raises fundamental questions regarding current agricultural assistance, especially that intended to benefit the poor, small-scale farmers and herders that OTA describes as "low-resource agriculturalists."

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the Congress, as much as other U.S.-supported groups such as AID, directly affects the effectiveness with which U.S. development assistance dollars are spent.

OTA's Work Nearing Mid-way Point

OTA began its assessment of "Low-Resource Agriculture for Developing Countries" at the request of your Committee, along with the House Science and Technology Committee, the House Agriculture Committee, and five members of OTA's Technology Assessment Board. In addition, the House Foreign Affairs Committee supported the request. This work began in July, 1985 and will be completed in June, 1987.

We are approaching the mid-way point of our work and are nearing completion of a special report on U.S. assistance to the Sahel. The special report is in draft form now, scheduled for release in early summer. Our Sahel analysis draws upon information derived from field work in Burkina Faso, Mali, and Senegal; technical and policy workshops with experts in Washington; as well as considerable OTA staff research. We have concentrated in this report on asking what the United States, other donors, and Sahelians have learned in our last ten years' experience, what the implications are for future assistance, and what prevents us from using those lessons most effectively.

We are examining information from throughout sub-Saharan Africa for our work on the full assessment that will be completed next year. We are now researching such topics as: new models of agricultural research and extension, an evaluation of Farming Systems Research, and incorporating participatory approaches in institutions. We'll be adding other tasks over the next months on topics such as the role of small-scale private enterprise in low-resource agriculture.

Now I'd like to summarize our findings so far.

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Who Are the Rural Poor?

We know, in a general way, who are the rural poor in Africa. They subsist on meager crop and livestock production, earning less than $150 per person per year. Many farmers till five acres or fewer to support their households. Often they live in houses made of mud and straw with no furnishings except a simple bed. Many of them eat a single meal each day and one child in five does not live beyond its fifth birthday. In general, these rural people have limited access to and control over land, labor, water, capital, external sources of information and technology, and external inputs such as commercial fertilizer.

We also know that this is the group that both produces most of the food in Africa and makes up the majority of Africa's people. At least 70% of Africans live in rural areas and produce the major share of the 70-80% of export earnings that derive from agriculture. Women's labor accounts for 60-80% of agricultural production.

However, we do not know many details of poor farmers and herders' lives in each of the 45 countries in sub-Saharan Africa: how much fertilizer they use, how many improved seeds they buy, how important is the money they receive from urban relatives, etc. Nor do we know many of the specifics about how vulnerability, physical isolation and weakness, and powerlessness interact to keep them poor.

It is clear, though, that these farmers and herders will be the ones to increase food production and accelerate their countries' development. This view reflects a broad consensus within the development community and is expressed in reports such as those of the World Bank that stress the role of "smallholders"; we have heard the same view expressed by African, French, U.S., and United Nations' officials in capital cities; and we have spoken with the farmers and herders who want to make this happen.

Less consensus exists, however, about what levels of overall national development this group can support, especially in the face of large and rapid population increases.

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What Does This Mean for Technology?

When we speak of "low-resource agriculture," or describe the farmers and herders as "low-resource agriculturalists," we are speaking of agricultural systems that are used by small-scale, poor farmers and herders relying on local inputs to support their families and households. People have developed a wide variety of different farming and herding systems throughout Africa, but most share certain important characteristics. The systems are:

- low-risk and diversified
- low-cost
- dependent on biological processes, local resources, and local knowledge
- based on adaptations to local environments and cultures
- dynamic and experimental

For example, we visited farmers in West Africa who grow sorghum, millet, and maize in the same small fields to increase their chances of at least some harvest in bad seasons. Ashes, manure, and household refuse provide a low-cost fertilizer for their vegetable gardens. They supplement their own food production with gathered wild plants, such as leaves and fruit from baobab trees. They can speak in great detail about the characteristics of different fuelwoods, based on generations of experience.

It is important to note that many of these characteristics are different from characteristics of American agriculture, where the goal of maximum yield with much less regard for risk has shaped the kinds of technologies that farmers and ranchers use. Therefore the specific technologies that African producers use now are very different from American ones. And the technologies that African producers want and can use in the future also may be significantly different from much of what we assume is standard agricultural technology.

This is not a disadvantage, though, because many of the features of African agricultural systems are ones that deserve conserving. For example, African farmers and herders have a long tradition of experimenting with their own grain varieties and cattle breeds. The two most successful improved upland rice varieties in Sierra Leone originated with local farmers who had also developed a number of crucial rice-growing innovations such as transplanting and swamp cultivation.

Low-resource agriculture, as practiced in Africa today, does not allow most African farmers and herders to escape from lives of drudgery, sickness, and poverty. Low-resource agriculture can be an opportunity, however. Technologies that match Africans' current economic, labor, and environmental conditions and build upon the strengths of their agricultural systems have potential for enabling farmers and herders to improve their lives.

A large part of OTA's remaining work will assess specific agricultural technologies, searching for ways that their best features can be improved without sacrificing what makes them useful to poor farmers and herders. For example, in the past many African farmers used "bush fallow" systems. They alternated crop cultivation with long fallow periods during which woody plants replaced crops; then the land was burned to begin the cycle again. While bush fallow systems have many advantages, they are less appropriate as the need for more intensive African agriculture increases. Scientists at the International Institute of Tropical Agriculture and the International Livestock Centre for Africa in Nigeria are testing "alley farming," a method of growing crops in alleys between hedgerows of trees or shrubs. Alley farming retains many of the original beneficial features of bush fallow while improving soil fertility and crop and animal productivity, saving money, and allowing more intensive land use.

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Learning From Our Mistakes

An unfortunately large part of our understanding of the features of "appropriate" technology comes from past failures in matching assistance to the needs and conditions of African farmers. Our evaluation of assistance in the Sahel shows that the United States and other donors made faulty assumptions about the availability of technology appropriate for use in arid/semiarid lands. For example, plant breeders in Africa discovered that Indian varieties of sorghum did not grow well in the Sahel, and that local germplasm needed to be incorporated into new African varieties. As a result of findings like this, plant breeding strategies for maize, sorghum, and millet at the International Agricultural Research Centers recently have shifted substantially. Technical goals now are to incorporate local germplasm, seek resistance to drought, and minimize risk in bad years - all new strategies with a limited track record.

In the Sahel, the United States and other donors have been disappointed to learn that our expectations for rapid agricultural development were overly optimistic, and that emphasis on complex, short-term projects hindered chances of long-term success. In addition, we learned that:

- we must understand the detailed workings of the Sahelian environment in order to account for special climatic, soil, and pest conditions and avoid projects that are ecologically destructive;
- "average" technologies are not suitable in a region with diverse farming systems and few "average" farmers and herders;
- we need more information on the social and economic conditions of Sahelian farmers and herders, and need to improve integration of what socio-economic knowledge we do have into technical programs;

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- farmers and herders evaluate technologies from a wider perspective than researchers and donors. Technologies that cost too much, ignore labor demands, are unsuitable for women, or harm family security will not be adopted;
- projects need design input from farmers and herders; otherwise they can generate inappropriate technologies and decrease chances of their adoption.

Repeating Our Successes

With such lessons learned, donors and recipients can begin to design projects that draw upon more appropriate uses of technology. New localized sorghum varieties show promise in Burkina Faso; windbreaks increased millet yields by 20% in Niger; and animal power is being used successfully in parts of Senegal.

In many cases, successful projects combine low-resource methods with suitable innovations. For example, Oxfam began a project in 1979 to use run-off water for tree planting in Burkina Faso. The original concept came from Israel via a Peace Corps volunteer; local women identified their favorite fuelwood shrubs; farmers actively modified the rainwater microcatchments; and scientists from the International Crops Research Institute for the Semiarid Tropics are monitoring results. At least 130 farmers adopted some of the methods in a three-year period and their training network now reaches some 30 villages.

Is Appropriate Technology Enough?

If the United States could identify all past mistakes regarding technology development and exchange in our own development assistance programs, could we modify them to ensure that development would occur?

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Our analysis of the Sahel Development Program suggests that institutional questions at several levels have at least as great an impact on the effectiveness of our development assistance as technological ones. Key questions surface: what are the goals of African farmers and herders? Do African officials share those goals? What goals are appropriate for the United States as one of many donors? And what should be the U.S. role when goals of various donors and recipients conflict?

The U.S. Government can, of course, determine its own goals for the assistance it offers to sub-Saharan Africa. Both the Congress and the Agency for International Development (AID) have formulated a broad set of explicit and implicit goals for the use of U.S. funds in Africa.

As we have examined problems of food production in Africa and the specific role of low-resource agriculture, OTA has found that certain explicit goals are not only appropriate based on stated U.S. policy, but they contribute to effective assistance. Such goals include:

- increasing the quality of people's lives
- maintaining and improving indigenous resources
- ensuring sustainable use of natural resources
- improving agricultural production
- removing or reducing agricultural bottlenecks in storage, marketing, and processing.

OTA finds that technologies commonly fail because they were not adequately evaluated against these factors. For example, in the past some agronomists recommended that African farmers make small changes that increased crop yields slightly. Now we know that poor farmers cannot afford to change well-established practices without assurances that their yields will increase by approximately half. This imposes different criteria on the selection of technology.

As OTA assesses various technologies, we will be judging their potential against this list to see what lessons we can draw regarding research gaps, the availability of technology for several different agroecological regions of Africa, and what the implications are for U.S. development assistance.

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OTA: Hearing from All Sides

Investigating why projects work and why projects fail has led us to examine interconnections among all parts of the U.S. development assistance network. For example, learning that agricultural development assistance is unlikely to improve without farmer input led us to ask whether foreign aid policy is likely to succeed without input from U.S. development authorities in the field. And hearing from AID field officials about their working relationship with AID-Washington leads us to questions about the nature of AID's relationship with Congress.

We have found ourselves in the middle, listening to speculation, complaints and exhortations from AID field staff, AID-Washington staff, and Congressional staff. The incompleteness of our full assessment at this time precludes a discussion of options for agricultural assistance throughout sub-Saharan Africa. But we have identified certain general areas of concern during research for our Sahel report that need to be addressed. Some of these are already on the Congressional agenda, others should be if we are to support effective programs:

- Can we clarify the intent of our assistance? Can we develop programs that optimize several goals without hindering development?
- Does the "Basic Human Needs" strategy spelled out in the Foreign Assistance Act need modification? Is it being modified de facto now without formal Congressional approval?
- How can Congress and AID develop a more effective working relationship? For example, how can Congress ensure AID's compliance with important U.S. policies, e.g., the environmental soundness of projects, and including women in assistance, without creating cumbersome mechanisms that decrease the likelihood that such policies are carried out?

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